



This document is shared for the purposes of learning legacy. It is a snapshot in time and hence many of the links within the document will become obsolete over time. Some links/document references will refer to a document storage location that isn't accessible. Users should refer to the learning legacy website where these documents may be published separately.

PROGRAMME CONTROLS

Change Control and Budget Management Procedure

Document Number: CR-XRL-Z9-GPD-CR001-50003

Document History:

Revision	Prepared Date:	Author:	Reviewed by:	Approved by:	Reason for Issue
1.0	03-10-2012	[REDACTED]			First draft
2.0	26-10-2012	[REDACTED]			Issued for Review
3.0	19-11-2012	[REDACTED]	[REDACTED]	[REDACTED]	Issued for Review
4.0	30-11-2012	[REDACTED]	[REDACTED]	[REDACTED]	Issued for Implementation
4.1	21-12-2012	[REDACTED]	[REDACTED]		Amendment to include ICSC comment and Scope Transfers for directs/indirects
5.0	10-09-2013	[REDACTED]	[REDACTED]	[REDACTED]	Indirects 5.1.4 6.1 Trend categories
6.0	06-06-2014	[REDACTED]	[REDACTED]	[REDACTED]	New Trend Categories
7.0	20-02-2015	[REDACTED]	[REDACTED]	[REDACTED]	Amending 'Areas' to 'Sectors'
8.0	09-06-15	[REDACTED]	[REDACTED]	[REDACTED]	Trend categories update

Business Owner (if different to Author):	[REDACTED]
---	------------

This document contains proprietary information. No part of this document may be reproduced without prior written consent from the chief executive of Crossrail Ltd.

Valid only if viewed through the CRL Management System Portal on Crossrail Connect

Contents

1 Purpose	3
1.1 Objectives	3
1.2 Principles	3
2 Scope	6
3 Definitions	7
4 Procedure: High Level View	10
5 Procedure: Detail	12
5.1 Change Proposal.....	12
5.2 Trends	18
5.3 Scope Transfer	21
5.4 Investment Authority.....	22
5.5 Contingency Management	25
6 Reference Documents	27
6.1 Trend Categories and Contingency Funding Sources	28
6.2 Programme Baseline Change Process	30
6.3 Trends Process	31
6.4 Scope Transfer Process	32
6.5 Investment Authority Process	33
6.6 Management of Forecast against IA Process	34
6.7 Change Proposal and Investment Authority Governance	35
6.8 Trend Review Meetings.....	38
6.9 Guidance on Number Conventions	39
7 Standard Forms / Templates	40

1 Purpose

The purpose of this procedure is to define the processes which apply to the control of change and the management of budgets and forecasts. This procedure covers:

- the Change Management process to establish a methodology for the review, mitigation and approval of all changes from the approved Programme Baseline. This includes requirements, scope, schedule and budget;
- the Trend process (to amend forecasts) which covers the early identification, mitigation and management of issues affecting the AFC; and
- the Investment Authority process by which Investment Authority is set and authority is given to proceed to tender (PTBA) and award a contract.

This procedure therefore provides the mechanism to amend Current Control Budgets, including the allocation of contingency to fund changes where appropriate. It also specifies the method and means to control the allocation and expenditure of Contingency throughout all phases of delivery, and the selection of appropriate sources of contingency funding.

The Cost Management and Forecasting procedure defines the processes to establish budgets and forecasts on the Crossrail Programme; this procedure defines how budgets and forecasts are changed.

1.1 Objectives

To alert Crossrail management to early indications of potential variance to the current baseline during the execution of the projects, and allow corrective action to be identified and implemented.

To apply strong governance to the allocation, expenditure and return of Programme Contingency, whilst providing timely and sufficient access to Programme Contingency to those managing delivery risks.

To establish budgets including contingency which are affordable within the funding envelope and represent value for money.

1.2 Principles

1.2.1 Authority to Tender

Before the issue of an Invitation to Tender (ITT), the following authorities are required:

- Package procurement plan and tender list approved in accordance with the Procurement Code;
- Pre-Tender Budget Authority.

1.2.2 Investment Authority

In order to award a contract, two forms of authority are required:

- authority to incur expenditure, as granted by Investment Authority; and
- authority to award a contract, as granted by the relevant authority in accordance with the Procurement Code.

1.2.3 Commitment Authority

Where a legal commitment, new contract or procurement, or amendment to an existing contract or procurement is required, authority to enter into such a commitment must be approved by CCSC, in conjunction with the requisite Investment Authority.

1.2.4 Change and Trends

Changes which will result in a deviation from the approved Programme Baseline and/or an amendment to the Current Control Budget (positive or negative), will require a Change Proposal.

Events which may impact the project or programme AFC will be managed through the raising, reviewing and resolving of Trends (together with the risk management process).

The Trend category determines the funding source; therefore it is critical that Trends are correctly categorised (see section 6.1). The funding of trend categories is aligned with the risk management framework, which allocates responsibility for managing categories of risk to the appropriate parts of the Crossrail organisation.

[REDACTED]

1.2.5 Contingency

The Crossrail Executive retains and controls Programme Contingency. This contingency will be the source of funding of cost arising from programme level risk events and the source from which Project and Sector Contingency is allocated.

Contingency will be assigned to the Projects and Sectors, at which point it will be managed by the Project Manager and Sector Director.

Projects and Sectors are empowered to manage all risks allocated to them within their contingency budgets. Where Project or Sector contingency is inadequate, an application will need to be made for increased Investment Authority (section 5.4).

[REDACTED]

1.2.6 Authority to approve trends, changes and budget transfers

Investment authority and the authority to release and transfer contingency are established by the Scheme of Authorities.

Authority to approve the resolution of trends, and transfer budgets, in the Prism system will follow the levels of Commitment Authority established in the Delegated Authority Register.

This is an internal authority and is not the same as Commitment Authority; however the same levels of authority for Crossrail post holders are used for convenience.

The high level authorities are summarised as follows.

	Trends and budget transfers	Release contingency	Investment Authority
Crossrail Board	████████	████████	████████
CCSC	██████	██████	██████
Programme Director, Finance Director	██████	██████	██████
Commercial Director	██████	██████	██████
████████████████	████████████████	████████████████	██████

*applies to budgets within the post holder's responsibility. Programme Contingency drawdown is reserved to CCSC.

2 Scope

This procedure is an integral part of the Programme Controls strategy, and is fundamental to the successful delivery of project execution plans. It will apply to the management of the Crossrail Programme Baseline and the delivery of all programme scope. This procedure applies to all direct works being managed by CRL within the Crossrail AF CDC. See below for detailed application of the relevant parts of this procedure.

	Investment Authority (incl PTBA)	Trend & Change Management
CRL Direct Costs, including: Central Section Works Berkeley Homes (Woolwich) Canary Wharf Works Surface Works (Crossrail funded) LU and NR Direct Works	Y	Y
Land & Property Acquisitions	N	Y
Indirect Costs	N	Trends processed centrally. Budget changes subject to Change Control.
On Network Works (Network Rail funded)	N	N
Rolling Stock and Depots Concession Contract	N	N

This procedure is distinct from any contractual mechanisms, although changes may emerge as a result of contract management activity for example early warnings and compensation events under the NEC form of contract or variations to other forms of contracts.

This procedure makes reference to the procedures and documents listed in section 6.

This procedure consolidates three previous procedures into one document, and therefore supersedes the following:

- Trend and Change Management Procedure (CR-XRL-Z9-GPR-CR001-00002);
- Investment Authority (CR-XRL-V2-GPC-CR001-00003); and
- Contingency Management Procedure (CR-XRL-V2-GPC-CR001-00002).

3 Definitions

The following sets out definitions for terms used in this procedure.

These are controlled within the Programme Controls Glossary of Terms [Ref 15]

Acronym	Term	Definition
AFC	Anticipated Final Cost	The accountable Crossrail manager's current best view of the final cost at completion of the works. (Note: the PDA has a specific definition of the AFC for reporting under the PDA)
AFC	Anticipated Final Cost: Contract Level	Prior to Contract Award, the Contract AFC = Current Control Budget + Resolved Trends Post Contract Award, the Contract AFC = Initial Total of the Prices + Resolved Trends (all at outturn value, i.e. including inflation)
AFC	Anticipated Final Cost: Project Level	The aggregate of the contract level AFCs + Project Risk Forecast @ P50 (all at outturn value, i.e. including inflation)
AFC	Anticipated Final Cost: Sector Level	The aggregate of Project level AFCs + Sector Risk Forecast @ P50 (All at outturn value, i.e. including inflation).
AFC	Anticipated Final Cost: Programme Level	The aggregate of Project and Sector level AFCs + Risk at Programme level + third party and indirect costs (all at outturn value, i.e. including inflation).
AFDC	Anticipated Final Crossrail Direct Cost	The AFC of all works funded by Crossrail (Note: the PDA has a specific definition of the AFDC for reporting under the PDA)
	Baseline Budget	Financial budget as approved by the CRL Board and agreed with Sponsors (all at outturn value, i.e. including inflation).
	Budget Transfer	Formal request for the transfer of Current Control Budget (and Investment Authority if granted) between contracts
	Change from Programme Baseline	Accepted change from the Programme Baseline scope, quality, cost and schedule, which will be reflected within the Current Control Budget
	Change Owner	Nominated Manager, responsible for initial impact assessment of change and securing approval of Change Proposal
	Commitment Authority	Authority to enter into a legal commitment, whether a contract or an amendment to a contract or to an instruction (eg a Change) under an existing contract. Commitment Authority can only be granted if Investment Authority is in place. The Board, Commercial and Change Sub-Committee and named individuals hold Commitment Authority [Ref 3].
	Contract Authority	Authority to sign the contract. Only individuals named in the Delegated Authority Register can sign or amend contracts on behalf of CRL.

CCB	Current Control Budget	The Baseline Budget and subsequent amendments reflecting approved change proposals, investment authorities and budget transfers. The Project CCB is the sum of the contract CCBs + Project Contingency. Prior to Contract Award, the CCB is the Original Baseline Budget plus approved changes including transfers. Post Contract Award, the CCB is reset to the Investment Authority that includes the contractor (target) contract price and permitted allowances and contractor risk.
	Contingency	A budget (at Board, Programme, Project and Sector level) which is set aside specifically to cover the cost of change and/or risk including unforeseen events, to be allocated and expended in accordance with the governance procedure against a defined scope.
	Sector Contingency	A budget allocated to the Sector Director to manage interface risk between projects, and other Sector risks. Transaction levels are governed by the Scheme of Authorities.
	Project Contingency	A budget allocated to the Project Manager to manage project risks. Its drawdown is governed by the Scheme of Authorities - limiting transaction levels, and by the Investment Authority process.
	Programme Contingency	A budget held at Programme level to manage programme level risks.
	CRL Board Contingency	A budget held at Board level to manage the delivery of the entire programme.
CCSC	Commercial & Change Sub-Committee	Crossrail Executive Sub-Committee authorised to approve commitment authority, change proposals, IA award and AFC adjustments in accordance with the Scheme of Authorities.
ICE	Implemented Compensation Event	An acceptance by the Project Manager of the Contractor's quotation for the change in Works or acceptance through a Project Manager's Assessment of the Contractor's quotation.
	Industry Partners	Partners delivering some sections of the Crossrail Programme, for example Canary Wharf Group, Network Rail and London Underground.
	Initial Total of the Prices	Tendered total of the prices at Award.
IA	Investment Authority	Authorised limit of expenditure (via the IA process) for a contract, project and Sector, which is available to commit external direct costs; required before a contract can be awarded.
IRG	Integrated Resourcing Group	The panel with authority to approve organisation changes
OCI	Optimised Contractor Involvement	A post contract award process undertaken during a given period whereby CRL and the supplier seek to identify and realise efficiencies
	Poor Performance	A cost increase that does not result in an adjustment in CCB or Contractor's Target Price.
PDA	Project Development Agreement	Agreement governing Sponsor and CRL responsibilities for delivering Crossrail
PCT	Programme Change Team	The team responsible for maintaining the programme baseline and managing change.

	Programme Baseline	The suite of documents comprising: <ul style="list-style-type: none"> • Crossrail Programme Functional Requirements • Sponsor's Requirements • On-Networks Functional Requirements • Environmental Minimum Requirements • New Works Standards • Scope Book • Generic sections of the Contract Works Information • Master Control Schedule Key Events and Anchor Milestones • Control Budget
	Programme requirements	The suite of requirements documents, also referred to as the Employer's Requirements, by which Crossrail is specified and will ultimately be accepted
	Project	A grouping of Work Packages or contracts that organises and defines the scope of the work required to deliver a particular aspect of Crossrail. It is the work assigned to a single accountable Project Manager which encompasses one or more Contracts.
	Project Manager	The budget holder responsible for the delivery of the project and its associated contracts. The Crossrail PM is normally the Project Manager's Representative under the terms of the NEC contract.
PTBA	Pre-Tender Budget Authority	Financial authority to release an invitation to tender.
QRA	Quantitative Risk Assessment	Method of calculating exposure to cost and/or time risk using quantitative modelling techniques
	Resolved Trend	Trend for which an impact has been authorised allowing AFC to be adjusted
RTF	Resolved Trend Forecast	The sum of the Initial Total of the Prices + Resolved Trends
	Risk Forecast	Impact of currently identified risks upon AFC; includes Unresolved Trends, excludes Resolved Trends
	Scope	Definition of the work necessary to meet the programme requirements
	Scope Change	A change from the programme baseline scope, resulting from a change in programme requirements
	Scope Transfer	A transfer of responsibility for delivery of elements of scope between Projects / Contracts, normally with an associated Budget Transfer
	Total of the Prices	Tendered Total of the Prices + Implemented Compensation Events (All at outturn value, i.e. including inflation)
	Trend	Potential event causing deviation from an agreed project scope, quality, cost or schedule baseline, which is logged as a trend via the Prism system
	Trend Owner	Nominated manager responsible for securing most effective resolution of Trend

4 Procedure: High Level View

Changes Pre-Contract Award

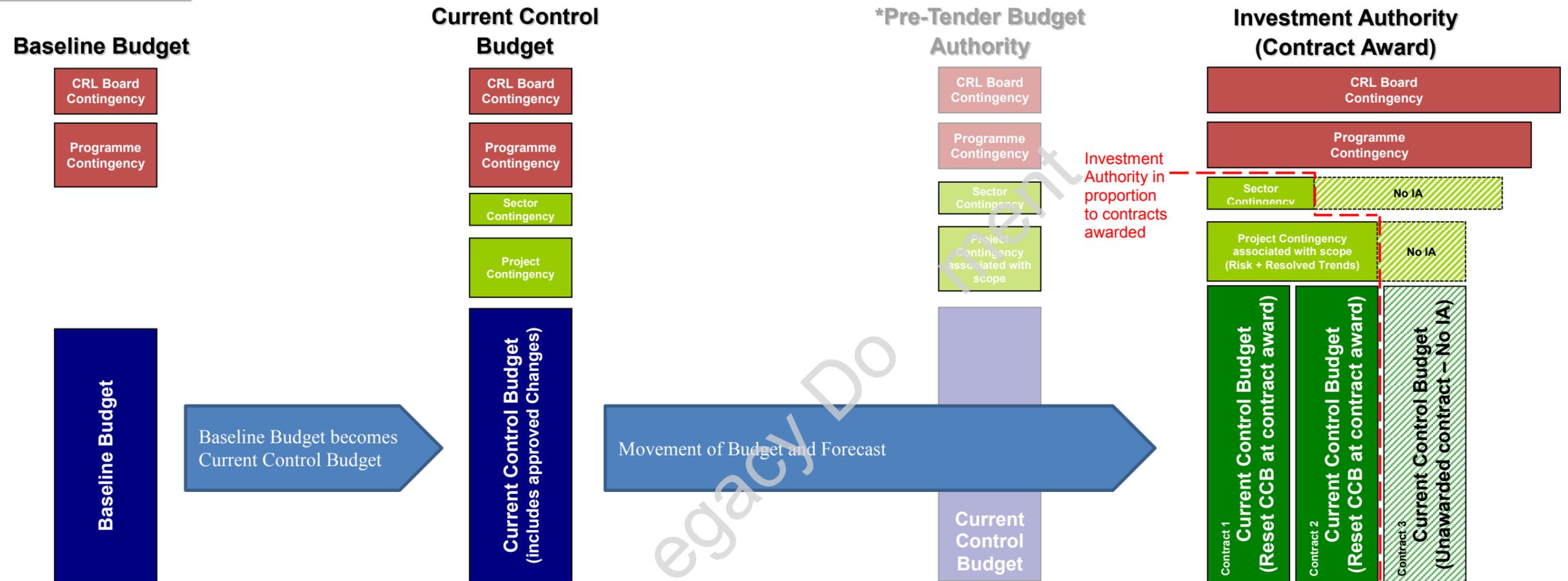


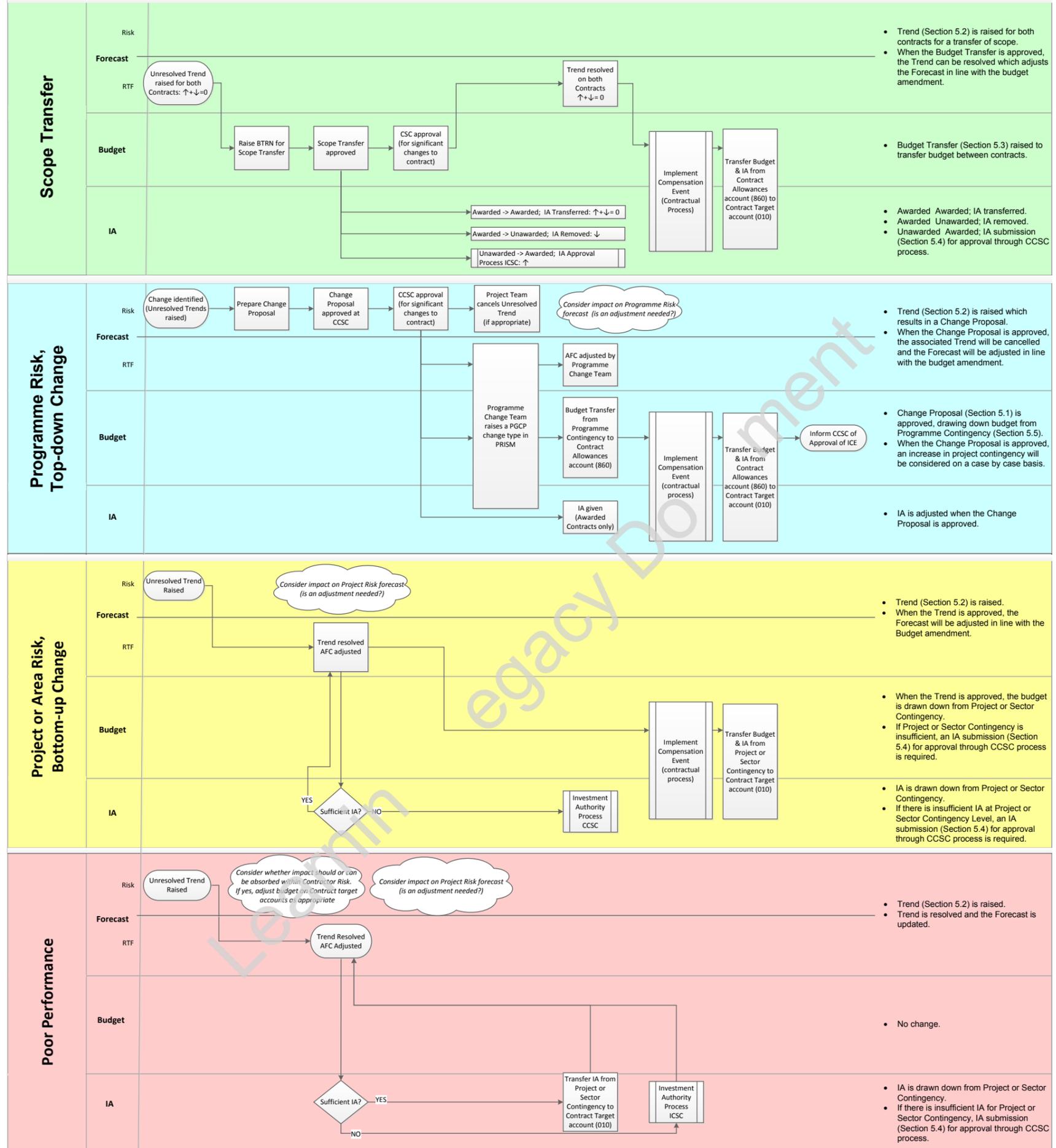
Figure 1

<p>Budget</p>	<p>Historical Note: The Baseline Budget was set at RP4.2. When the next programme re-baseline exercise occurs, the CCB will be replaced by the new Baseline Budget.</p>	<p>The Current Control Budget can only be adjusted:</p> <ul style="list-style-type: none"> when a Change Proposal (Section 5.1) is approved, drawing down or returning budget from / to Programme Contingency (Section 5.5); via a Budget Transfer (Section 5.3) to transfer budget between contracts. 	<ul style="list-style-type: none"> IA process aligns the Budget, AFC and Investment Authority. At Contract Award, the CCB and AFC is reset to match the Investment Authority (in the instance that full contract scope is awarded).
<p>Forecast AFC</p>		<ul style="list-style-type: none"> When a Change Proposal is approved, the Forecast will be adjusted to align with the change in Budget. Trends (Section 0) can be raised which may not result in an approved Change Proposal adjusting the budget. In this instance, resolving the trend will adjust the Forecast only. 	<ul style="list-style-type: none"> Investment Authority submission (Section 5.4) to CCSC requesting authorisation to spend up to the Investment Authority (including IA for a proportion of Project and Sector Contingency).
<p>Authority</p>		<p>Note *: The Pre-Tender Budget Authority process (Section 5.4) ensures that the expected financial impacts of packages (including risk and inflation) are understood at senior level before tender documents are issued, so that, where necessary, cost saving measures can be considered.</p>	

Changes Post-Contract Award

HIGH-LEVEL CHANGE MANAGEMENT PROCESS DOCUMENT

- Reminders**
- Financial commitments must not be made without the appropriate authority in place.
 - Investment Authority is provided by CCSC.
 - Trends and scope transfers require approval in accordance with the Delegated Authority Register (see below).
 - Drawdown of Programme Contingency to create additional budget requires approval in accordance with Scheme of Authorities (see below).
 - Trends must be raised, categorised and resolved promptly in accordance with the risk management framework. The relevant risk forecast must be adjusted appropriately.

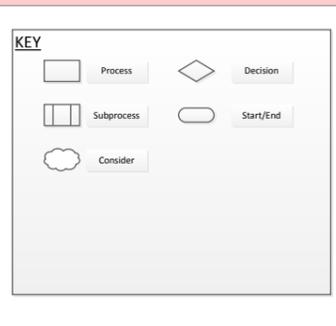


Authority holder	Trends and budget transfers	Release contingency	Investment Authority
Crossrail Board	Unlimited	Unlimited	Unlimited
CCSC	£100m	£25m	£100m
Programme Director, Finance Director	£10m	£10m	£10m
Commercial Director	£5m	Nil	Nil
Central Section Director*	£1m	£1m	Nil
Sector Director*	£500k	£500k	Nil
Deputy Sector Director*	£375k	£375k	Nil
Project Manager*	£250k	£250k	Nil

*applies to budgets within the post holder's responsibility.
 Programme Contingency drawdown is reserved to CCSC.

ABBREVIATIONS

AFC – Anticipated Final Cost
 IA - Investment Authority
 ICE – Implemented Compensation Event
 CCSC – Commercial & Change Sub-Committee
 PGCP – Programme Change Proposal
 RTF – Resolved Trend Forecast



Crossrail
 High-Level Change Management Process Document

Prepared by: Elizabeth Gillbe
 Checked by: Walter Macharg
 Approved by: David Allen

Document No: Figure 2
 CR-XRL-Z9-GPD-CR001-50003
 Rev: 8.0
 Date: 01-06-2015

Figure 2

5 Procedure: Detail

5.1 Change Proposal

See Section 6.2 for the process map for Change Proposals.

Responsibilities

	Process	Project Team	Change Owner	Change Sponsor	Programme Change Team	Change Reviewers	CCSC	Programme Controls Team	Finance
1	Draft Change Proposal	C	R	A	C	-	-	-	-
2	Review	I	R	C	R	A/R	-	C	C
3	Approve	I	I	R	R		A	C	C
4	Amend Budget (and AFC and/or IA if applicable) in PRISM	I	I	I	C	-	-	A/R	I
5	Reconcile Budget and IA between SAP and PRISM	R	I	I	I	-	-	-	R
6	Record / Update Baseline Documents	I	I	I	R	-	-	-	-

Key:

R	Person R esponsible within the business for carrying out the step
A	Person A ccountable to the business for the quality, integrity and sufficiency of the output from the step
C	Person C onsulted
I	Person to be kept I nformed of progress or issues during the execution of each step

5.1.1 Programme Baseline Change

Where the change:

- Alters the Crossrail Programme Functional Requirements, Sponsor's Requirements, On-Networks Functional Requirements, Environmental Minimum Requirements (EMR), New Works Standards, or the Scope Book;
- Amends any Current Control Budget via a transfer from Programme Contingency (positively or negatively);
- Requests budget to fund Over Site Development (OSD);
- Impacts Whole-Life Costs;
- Amends Key Events and Anchor Milestones;
- Amends the generic sections of the Contract Works Information;
- Relates to a Programme risk in the risk matrix (trended as one of the Programme trend categories in section 6.1)

then it shall be deemed a Programme Baseline Change, in which case a Change Proposal shall be prepared using the Programme Change Proposal Form [Ref A] for consideration at CCSC.

5.1.2 Programme Baseline Change and the impact or mitigation of any Programme Risks will be funded by drawdown from Programme Contingency. All other Changes will be funded from Project or Sector Contingency, which is drawn down via the raising of budget transfers and the resolving of Trends. Approved change amounts relating to Indirect Costs shall be drawn down from the Programme Contingency and transferred into the CEO Contingency for subsequent approval at IRG.

5.1.3 Design change

Design change is a Programme risk and is trended as DDEV (design costs) or CIDD (construction impact).

The exception is design development change with an expected impact under [REDACTED] which may be authorised by Project Managers and coded PDEV, and under [REDACTED] which may be authorised by Sector Directors and coded ADEV.

This is subject to the PM and Sector Director being satisfied that:

- the change is not a scope increase
- the cost of implementing the change represents value for money
- the change is necessary to deliver the approved scope
- impact on time and cost is understood
- the change is due to design development and is “bottom up” due to local conditions not top down from CEG or other CRL or third parties
- the change is not a result of FDC error – such changes must be referred to Programme Change, where possible recovery will be considered by the Technical Directorate Commercial team.

If the PM / SD are not satisfied as above the issue should go to Programme Change.

5.1.4 Retrospective change

Programme funded trends can only be resolved through the Programme Change process. Authority must be granted before the change is committed by instruction to the contractor. Change must not be instructed before authority is received.

The Programme Director and Finance Director have delegated authority to approve change if urgent approval is required.

5.1.5 Contingency allowance on changes

Projects and Sectors have been allocated contingency budgets, which are intended to be sufficient to manage the scope of the project. Programme changes will not automatically include a contingency element. However it is recognised that it may not be possible for a project to operate within its existing contingency budget where

- a programme change significantly increases the project's scope; and
- the project risk forecast from the latest QRA at P50 is significantly in excess of the project contingency budget.

Programme change papers which request an increase in project or Sector contingency budgets will need to make the case with reference to the above criteria, and will show the proposed budget increase allocated to the relevant contingency WBS code in the financial table (paragraph 5.1.19). The Head of Change Control will recommend to CCSC whether the contingency budget should be approved.

5.1.6 Changes to Schedule

Changes to Key Events and Anchor Milestones within the baseline Master Control Schedule are subject to the processes described within the Programme Schedule Management Procedure, and will be approved by CCSC. The impact assessment of any change must include consideration of schedule impacts, including the cost impact associated with any schedule change.

5.1.7 OSD changes

Changes originating from the requirements of Over Site Developments have additional requirements to ensure that change is appropriately approved by TfL and costs are recovered in accordance with the OSD Protocol. The Change Owner for these types of change will be allocated to the OSD Team. The OSD team will be responsible for confirming that changes and associated budget impacts are acceptable to TfL through submitting for approval at the Property Sub-Committee, prior to authorisation of baseline change by CCSC.

5.1.8 Review Groups

Review Groups will be held prior to submission of the Change Proposal for consideration by CCSC. The governance and terms of reference for the Review Groups is given within Section 6.7.

5.1.9 Sponsor Change

Any Change that:

- is initiated by the sponsors;
- is likely to impact on sponsor requirements;
- arises from an Adverse/Material Event as defined within the PDA; or
- will result in a Sponsor approval for a change in permitted use of funds,

will be managed by the Chief of Staff Office with assistance from the Programme Change Team (PCT) using the Change Process outlined in Schedule 4 of the PDA.

This Change Control procedure has been aligned to the Schedule 4 process for consistency. Any Change Proposal requiring Sponsor Affirmation will only be considered authorised once Affirmation of the Change is obtained.

Where a proposed change conflicts with the PDA, forms a Material or Adverse Event as defined under the PDA, conflicts with the Sponsor Requirements or commitments under the Crossrail Act, or will have a material adverse impact upon whole life costs, it shall be deemed a Sponsor Change and referred to CCSC for decision. Sponsor Changes will additionally require Sponsor approval.

5.1.10 Industry Partner Change

Industry Partners are responsible for managing change within their own remitted scope. However nominated lead Industry Partner Managers are required to notify and seek approval via this procedure in the following circumstances:

- Change to Industry Partner instructed requirements;
- Changes likely to have an adverse impact to commitments, undertakings and assurances under the Crossrail Act;
- Change that will be funded from Programme Contingency;
- Change that involves transferring scope between Delivery Partners; or
- Changes to baseline schedule that will amend MCS Anchor Milestones.

5.1.11 Indirect Costs Budget Change

Changes which impact the Indirects CCB, AFC and/or IA, by way of transfer, re-baseline, re-forecast or the like will be processed through PRISM. Refer to the configured approvals route in

PRISM. This may require additional management review by the Finance Team and Finance Director. Where a change impacts upon both direct and indirect cost, the indirect cost must be clearly identified as such.

5.1.12 Change which impacts future operating costs, benefits, whole-life costs or 3rd parties

Changes that impact future operating costs, financial benefits or non-financial benefits, whole-life costs or third party costs are to have a quantified business case where such impacts affect Crossrail Limited's capital expenditure. The Investment Appraisal process can be found in the Procedure for Investment Appraisal.

5.1.13 Recharge Changes

Changes which are fully funded by a third party will be subject to the standard change template, impact assessment and review process. However, any change with a total recharge value less than £500k may be approved by the Finance Operations Director, acting as a delegate for CCSC.

5.1.14 Residual Contract Contingency

Residual CCB for contingency not associated with scope should be returned to Programme Contingency. Should the Sector Director wish this contingency be recycled within the Sector, up to £5m may be transferred and must be reported through the relevant Programme Delivery Board and noted at that meeting.

5.1.15 Residual Contract Budget resulting from undelivered, redundant or unawarded scope.

The CCB should always be located with the associated scope of work. If the scope of work is not required, the CCB must be returned to Programme Contingency via the change process as "un-delivered/redundant scope" promptly after the scope is known not to be required. For returns over £0.5m, a change paper is required. Lower amounts may normally be returned by BTRN (Head of Change Control will provide guidance). If the scope of work is being transferred from one contract to another, the associated CCB should be transferred with it (via a budget transfer/ ICE process).

5.1.16 Commercial Close Out - Current Control Budget (CCB).

Where commercial close out identifies that all scope has been delivered by the contract, CCB will be retained as is and final performance metrics will be based on this. Where scope originally intended to be undertaken by the relevant contract is undertaken by another contract, or not at all, the allocated CCB for that scope will be transferred to the other contract or programme respectively.

5.1.17 Commercial Close Out - Investment Authority (IA).

At commercial close-out of contracts, any residual IA in excess of the Estimated Contract Cost (ECC) will be returned to programme. If the IA is less than the ECC, further IA will be sought. Both of these scenarios will be managed via the CCSC process.

5.1.18 Changes are raised by the Change Owner. A Change Register will be maintained by the Programme Change Team which will log all potential changes that Change Owners would like

CCSC to consider. The Change Register will provide an input to the Programme Level QRA. Approved Change Proposals will be sent to Finance and the Programme Controls Team for updating the Current Control Budget, Forecast AFC and Investment Authority on PRISM and SAP.

5.1.19 Providing the total impact of change within a Change Proposal

Successful operation of change control relies on the prompt submission by Change Owners to avoid dealing with retrospective change. Key to this is providing the total impact of the change within the change proposal, including accurate cost estimation for both design and construction.

The following guidance is given to provide clarity on who is accountable for ensuring ALL information pertinent to a change is included within a Change Proposal, specifically if a change impacts more than one contract (design or construction).

If an event arises that results in the preparation of a Change Proposal, the Change Owner instigating a change is responsible for including the potential impact (in terms of cost, schedule, health and safety, stakeholder, commitments, legal, environment and consents, operations, QRA). The impact assessment should include not only the contract the Change Owner is responsible for, but ALL contracts that are impacted by the change. If external Industry Partner input is required, then the impact of this must be included within the Change Proposal.

Control Budget Changes are noted in the tables section of the Programme Change Proposal Form given below which allows additional budgets for multiple contracts to be included.

BUDGET CHANGES PROPOSED			
WBS (Area-Project-Work Package-Activity Group-Activity)	CCB £	IA £	AFC £
XXX-XXXX-XXXX-XXX-XXX			
XXX-XXXX-XXXX-XXX-XXX			
XXX-XXXX-XXXX-XXX-XXX			
Total Change	-	-	-

TRENDS / QRA risks				Resolved/
Prism ID / risk ref.	Date raised / QRA date	Trend Category	AFC £m	Unresolved
Trend xxxx-xxxx				
Trend xxxx-xxxx				
Trend xxx-xxxx				
Risk TEV xxx				
Total			-	

CURRENT FINANCIAL STATUS as at Pxx				
before change	CCB £m	IA £m	AFC £m	ACWP £m
Pxxx - Cxxx title				
Pxxx - Project Contingency				
Pxxx - Other Contracts				
Pxxx Current Total	-	-	-	-
Sector Contingency / Risk				

The following examples are given for guidance and clarification:

- a. **Technical related change** that impacts upon a number of projects, for example a change in specification, Code of Practice, British Standard, Crossrail Policy or legislation. In this instance, the Change Sponsor will be from the Technical, Land and Property or Commercial Directorate who will appoint a Change Owner responsible for quantifying the total impact across all design and construction related contracts. Supporting information will be provided by the Design and Delivery Teams responsible for the impacted contracts.
- b. **Optimised Contractor Initiatives (OCI)**. A benefit analysis including potential saving resulting from an OCI together with design and construction costs incurred must be provided by the project team for sign off by the Chief Engineer. All OCI are subject to Change Control sponsored by the Project Manager, who will appoint a Change Owner from the Delivery Team. Design related costs associated with OCI are incorporated within the Change Proposal and provided by the Chief Engineer's Group. NB OCI savings will not normally reduce the project budget.
- c. **Change on a construction contract** as a function of further design maturity resulting in a change in construction methodology impacting on a single project. Although the change may result in (or from) design change, the Change Owner is the Project Manager as the Project Team is best placed to quantify the change. Supporting information quantifying the design impact will be provided by the Chief Engineer's Group.
- d. **Mitigation of schedule delays caused by multiple sources across a number of Projects or Sectors**. Changes that support mitigation of the Master Control Schedule and Anchor Milestones that have multiple sources must be sponsored by the Sector Director (if contained within one Sector) or the Central Delivery Director (if the change impacts more than one Sector).
- e. **OSD changes**. For changes which originate from the requirements for Over Site Developments, the Change Owner will be from the Land and Property Team, with input from the Delivery Teams and Technical.
- f. **Changes in requirements to Operations**. The Change Owner will be from the Operations Team, with input from the Delivery Teams and Technical.

5.2 Trends

See Section 6.3 for the process map for Trends.

Responsibilities

	Process	Cost Engineer	Trend Owner	Project Teams	Programme Change Team	Reviewers	Programme Controls Team	Delegated Authority	Finance
1	Raise Trend	R	A	C	-	-	-	-	-
2	Mitigation and Assessment (Project Level)	C	A	R	-	-	-	-	-
3	Management Review (Trend Review Groups)	I	R	I	C	A/R	C	-	
4	Resolve and Authorise	C	R	C	I	-	-	A/R	I
5	Implementation	R	A	R	I	-	I		-

5.2.1 Summary

Trending provides a vehicle with which to mitigate and manage impacts to the AFC. Trends can be raised with quantification of impact for multiple contracts across multiple Sectors. This will allow the initiator of the trend to capture all impacts of the change against a single trend.

The Trend category determines the funding source; therefore it is critical that Trends are correctly categorised (see section 6.1). The funding of trend categories is aligned with the risk management framework, which allocates responsibility for managing categories of risk to the appropriate parts of the Crossrail organisation.

Trends which are recorded as unresolved will provide an input to the Programme level and Project level QRA process, informing the overall risk forecast for inclusion within cost forecasting. As Trends are resolved, this should be reflected through adjustment to the risk forecast.

Once a Trend is resolved, the Project Manager has authority to instruct commitment under the contract. Further guidance on authority to commit is contained within the governance overlay section of the Contract Administration Manual.

All Trends will follow a series of stages involving:

- Raise Trend;
- Mitigation and Assessment;
- Management Review;
- Authorisation (resolution of Trends); and
- Implementation.

5.2.2 Raising Trends

The early identification of Trends is a key principle of this procedure and the responsibility of all programme staff. Different types of change will then be processed according to the activities described in the following sections.

Any project or programme team member may raise a Trend through the appropriate Project Cost Engineer.

5.2.3 Logging and Categorising Trends

Upon notification of the Trend the Project Cost Engineer is required to enter the Trend into the Prism change module.

The Project Cost Engineer will nominate and record a Trend Owner for each proposed change. Typically this will be the Project Manager or Project Engineer responsible for the impacted scope of work.

The Trend will be categorised and coded according to its source, as defined in Section 6.1.

Trends which are potential requirements and / or scope changes from the programme baseline should also be raised and discussed at the Programme Trend Meeting.

Trends must clearly distinguish between amounts relating to Direct and Indirect Costs.

5.2.4 Mitigate and Impact Assess Trend

The Trend Owner is required to mitigate the Trend where possible, minimising impact upon quality, schedule and cost. The Trend shall be reviewed at project-level meetings, where actions may be agreed to ensure effective mitigation.

The Trend Owner is required to assess resulting impacts on the programme or project baseline, taking account of mitigating actions. This must include assessment of impacts to Requirements, Scope, Quality, Cost, Schedule, Operations and 3rd parties (e.g. LU, NR, etc). The Trend process is concerned primarily with identifying and implementing mitigating impacts, and so order of magnitude assessments are normally considered adequate.

Schedule trend impacts will be considered as a preliminary and project level assessment. Every effort will be made to maintain the baseline schedule. When a change from the programme baseline with schedule impact on Anchor Milestones and / or Overall Completion dates is identified, a more rigorous assessment of programme wide impact will be required, as detailed in the Programme Schedule Management Procedure.

A summary of cost and schedule impact should be recorded on the Trend.

5.2.5 Management Review

Trends will be reviewed for appropriate action and potential resolution at the relevant Trend Review Meetings. The governance and terms of reference for the Trend Review Meetings is given within Section 6.8. Design development Trends will be reviewed at the Design Trend meeting. Other Trends will be reviewed at the applicable Project, Sector or Programme Trend Meeting.

Trends should not be left unresolved for long periods. Where an issue is expected to occur and impact the AFC, the trend should be resolved and uncertainty as to values dealt with in the QRA.

5.2.6 Authorisation

All Trends shall be subject to appropriate authorisation before being recorded as resolved and implemented.

The authority to approve trends is defined as Financial Authority by the Scheme of Authorities and granted to the post holders identified in the Delegated Authority Register. Trends with values greater than £1m are reported to CCSC for noting. Trends with values greater than £5m are submitted to CCSC for approval.

Trends should be resolved at their full anticipated cost impact. Contract pain / gain adjustments should not be taken account of in valuing a Trend. Trends may be raised for the overall effect of pain / gain when agreed to be appropriate by the HQ Programme Cost Manager and Project Manager.

The contingency to fund the trend is determined by the trend category (Section 6.1). Where the project or Sector contingency is insufficient, an IA Submission (Section 5.4) is required to request drawdown from programme contingency, to be approved by CCSC.

5.2.7 Implementation

The relevant Cost Engineer is responsible for communicating the authorisation, rejection or cancellation of the Trend.

The Trend Owner is responsible for instructing the change to affected parties, and implementing through contract management actions.

The Trend Owner must confirm back to the Programme Change Team that the change has been instructed.

Schedule change where relevant shall be implemented through the Planning team and the applicable Programme Schedule Management process.

5.3 Scope Transfer

See Section 6.4 for the process map for Scope Transfers.

Responsibilities

	Process	Cost Engineer	Trend Owner	Project Team	Programme Change Team	Delegated Authority	Programme Controls Team	Finance
1	Raise Scope Transfer Trend	R	A	C	-	-	C	-
2	Verify information (scope and budget amounts)	R	A	C	-	-	-	-
3	Resolve Trend / Approve Budget Transfer	-	R	R	C	R/A	-	C
4	Implement Budget Transfer	-	-	R/A	I	-	I	R
5	Update Baseline documents	-	-	C	R	-	-	-

5.3.1 Summary

A Budget Transfer (BTRN) should be raised to capture the details of the scope to be transferred.

Changes which solely involve scope transfers and associated budget transfers between contracts within a Project, or contracts / projects within the same Sector, with no impact to the overall AFC, can be approved through the agreement of the respective budget holders (subject to Financial Authority in accordance with the Delegated Authority Register), illustrated in the flow chart in Section 6.4.

This requires the agreement of scope and budget (and the associated IA, where provided) to be transferred, and authorisation by both donor and recipient budget holders. Once authorised, records of the transfer will be maintained in PRISM G2 and SAP by the Cost Engineer and Project Accountant respectively, and the Scope Book will be updated by the Programme Change Team.

PRISM G2 will record both donating and receiving contract / project impacts, so that a net neutral impact is indicated. In the event that the cost of the work is expected to exceed the value of the existing budget, a separate Trend should be raised for the difference in value.

For transfers between Indirects to Indirects, a BTRN in PRISM is raised to move CCB and IA. For transfers between Directs and Indirects, a PGCP in PRISM is raised (no Change Proposal required). If a trend has already been raised for moving the AFC, then the PGCP should be linked to the trend, and the PGCP only used to move CCB and IA.

Where scope transfers are between different Sectors, these will be reported to CCSC by the Programme Controls Team for noting. Scope transfers between delivery partners will require a Change Proposal (Section 5.1).

5.4 Investment Authority

See Section 6.5 for the process map for Investment Authority.

Responsibilities

	Process	Project Team (incl QRA)	IA Sponsor	Finance	Programme Change Team	CCSC / Board	Programme Controls Team
1	Prepare IA submission	R	A	C	C	-	-
2	Review IA submission and supplementary information	I	A	R	C	-	C
3	IA submission for Approval	I	R	I	I	R/A	-
4	Update PRISM	R	-	I	-	-	-
5	Update SAP	-	-	R	-	-	-
6	Monitor AFC against IA	R	A	R	-	-	R

5.4.1 Summary

The Pre-Tender Budget Authority (PTBA) process establishes the expected financial impacts of packages (including risk and inflation), and ensures they are understood at senior level before tender documents are issued so that, where necessary, cost saving measures can be considered.

The Investment Authority (IA) process establishes the authorised limit of expenditure for the contract or work packages concerned and the authorised limit of expenditure for the Project and Sector Contingency budgets. The IA process provides confidence to the Crossrail Board that work packages are only authorised to proceed to tender or contract award when:

- a. compliance with required governance has been demonstrated;
- b. budgets including contingency have been established which are affordable within the funding envelope and represent value for money;
- c. work packages have sufficient design definition (in accordance with Crossrail's defined engineering gate processes) appropriate for progression into delivery;
- d. work package proposed scope, schedule and budget is consistent with the current Programme Baseline.

The gateway to receive Investment Authority and PTBA will be through the CCSC. Delegation limits will be established such that high value authorities will be endorsed forward to the CRL Board. Lower value authorities may be delegated to the Chief Executive or others (delegation levels set out in the Scheme of Authorities), but only by exception when it is not possible to seek authority from CCSC.

Investment Authority will be established as:

- At contract level:
 - Tendered target price;
 - Plus allowances;
 - Less allowance for OCI if appropriate; and
- At Project and Sector Level:
 - An element of contingency associated with the scope procured to date.

When the Investment Authority is granted, Finance will release the Authorised Budget in SAP at the contract level and also at the contingency levels. This will enable purchase orders to be raised at the contract level. Use of contingency will be drawn down to a contract level via an ICE.

Finance will maintain a register of Investment Authorities and Pre-Tender Budget Authorities granted; investment authority is also recorded in Prism.

The initial Investment Authority process resets the contract Current Control Budget and contract Forecast AFC to match the contract Investment Authority (assuming no unawarded scope remains in the work package). The process also grants Investment Authority for a proportion of the project and Sector contingency.

When a Programme Contingency funded change is approved for a contract which already has Investment Authority, IA in the same value as the change will normally be approved at the same time (at the discretion of the CCSC).

Approved change amounts which relate to Indirect costs will not receive investment authority. Such authority will need to be gained from IRG.

5.4.2 Pre-Tender Budget Authority

Pre-Tender Budget Authority (PTBA) is required before issue of an Invitation to Tender (ITT). The expected cost and risk are reviewed and validated, but budgets are not transferred to the work package. This provides a forward view of commitments.

The PTBA submission is made using the Programme Change Proposal Form [Ref A], and the Investment Authority QRA template [Ref B]. At the PTBA stage the purpose of the risk assessment is to inform the procurement process and to indicate the likely cost of risk outturn. Where this generates a risk value substantially higher than the available budget the authorising authority will need to consider whether it is appropriate to proceed to tender.

The available budget will be compared to the expected outturn cost according to the latest estimate which has been approved by the Head of Cost.

5.4.3 Investment Authority

An Investment Authority submission is required comprising the Programme Change Proposal Form [Ref A], and the Investment Authority QRA template [Ref B].

The Project Manager is responsible and Sector Director is accountable for the Investment Authority submission.

Signatures are required for the paper to be accepted onto the CCSC agenda, the template states the responsibilities of each signatory.

Any supplementary information is required to be available for review by Finance and Project Controls. It is not necessary to attach this information to the CCSC paper.

Investment Authority Requests do not need to be presented to the Review Groups. However, they will be subject to the Pre-CCSC Review.

In order to grant Investment Authority on contract award CCSC will require to be satisfied that:

- The tender price is within the Current Control Budget and consistent with the defined baseline scope or if not, CCSC is prepared to increase the Current Control Budget through grant of Investment Authority, funded from Programme Contingency;
- Value for money has been considered in accordance with CRL processes;
- Design gateway pass has been confirmed;
- Risk assessments have been appropriately completed to inform whether the existing contingency budgets remain sufficient and to set the starting point for risk exposure reporting;
- Allowances for inflation have been appropriately calculated (Investment Authority will be granted at outturn prices and inflation in excess of allowances will be managed as a risk);

- Any foreign currency flows identified and FX hedging strategy established;
- Commodity procurement strategy and any advance purchases identified;
- Sponsor and stakeholder issues have been identified and compliance with the programme commitments confirmed;
- Any unbudgeted Land & Property acquisitions identified; and
- Interface issues with other Crossrail packages and key interface milestones have been identified and that the proposed schedule is consistent with key interface milestones identified in the baseline schedule.

CCSC must be informed of the status of procurement authority for the work package.

5.4.4 Management of Forecast against Investment Authority

The Investment Authority for each contract establishes the limit up to which a purchase order can be raised in SAP, therefore the maximum amount that can be paid to the Contractor.

AFCs must be monitored against Investment Authority each period at contract and project level.

Where AFCs are greater than Investment Authority, an action plan to reduce AFC must be developed by the Project Manager and approved by the Sector Director, for reporting to CCSC. This is illustrated in section 6.6.

An application to CCSC to increase Investment Authority by drawdown of Programme Contingency must be made as soon as action plans to reduce the AFC are not expected* to succeed in reducing the AFC below Investment Authority (*CCSC decision to be final) and there is insufficient Investment Authority to cover the overrun within project or Sector contingency.

When Investment Authority is increased due to cost overruns, the Current Control Budget (which is used for performance measurement) will not be increased. This is funding only Investment Authority. In this case CCSC will require to be satisfied that the estimate is robust and that measures are in place to mitigate further cost overruns.

Where increased scope or drawdown of programme contingency is approved via change control in relation to works which are already authorised, an appropriate increase in Investment Authority should be approved by CCSC as part of the change approval.

Where scope is transferred which is already authorised (between contracts or projects, or from indirects budgets including OSD design), Investment Authority is transferred using the Budget Transfer process without requiring further approval by CCSC.

Significant changes to contracts, whether by scope increase or transfer or drawdown of Programme Contingency will also require commitment authority.

Where a contract / work package AFC is below Investment Authority, a notification should be tabled at CCSC to reduce the Investment Authority, once the Sector Director is reasonably confident that the AFC is secure.

On completion of a project a completion report will be submitted to CCSC, handing back unused Investment Authority.

5.5 Contingency Management

The Contingency budget is structured as Board, Programme, Sector and Project Contingency. The contingency structure and risk coverage is explained in Table 1 and a detailed table of Trend Categories and Contingency Funding Sources is given in Section 6.1.

Name	Coverage	Method of calculation	Budget Treatment	Investment Authority	Process to expend
Board Contingency	Top slice prior to Intervention Point 1 (Scope Change, Schedule Acceleration, 3 rd Party Risks)				Formal process, initiated by CRL Executive and controlled by the CRL Board
Programme Contingency	Primary source of funding excess cost arising from programme level risk, and the source of which Contract, Project and Sector Contingency is allocated through the IA process.	Total budgeted Contingency less CRL Board Contingency	Included as a single reserve.	Excluded from IA	Formal process, drawdown authorised by CRL Executive (CCSC) through a Change Proposal, recorded in SAP and PRISM
Investment Authority (IA)					
Sector Contingency	Central allocation of risks to manage interface risks between projects and Sector, managed by the Sector Director.	Allocated by CCSC in addition to the Project Contingency	Shown as a specific and separate budget allocation within SAP & PRISM	Included in IA allocated down from Programme Contingency	Sector Director may commit via the Trends process, but must comply with the Scheme of Authorities
Project Contingency	A specific contingency to fund project level risk events managed through a portfolio of contracts. To be held at project level for the PM to manage in a way that optimises the performance of his Project (portfolio of contracts)	Allocated by CCSC in addition to the Total of the Prices + allowances	Shown as a specific and separate budget allocation within SAP & PRISM	Included in IA allocated down from Programme Contingency	Project Manager may commit via the Trends process, but must comply with the Scheme of Authorities
Total of the Prices (Target Cost)					
Contractor Contingency included within Total of the Prices (Target Cost)	To fund events such as delivery cost overrun Compensation Events and other Contractor Risks	As contained in tender	None	Included in initial IA as part of contractors Target Cost. Risk of overspend will be retained by contractor (subject to pain / gain share)	n/a
OCI Target	Target for OCI which will contribute to pain/gain performance	As determined at CCSC	Reduction in contract budget	Included in IA	n/a

Table 1: Crossrail Contingency Structure

5.5.1 Programme Contingency

Programme contingency can be drawn down by raising a Change Proposal (Section 5.1) in the instance of Programme Contingency funded change, or, via the IA process.

The approval of the Change Proposal will provide authority for release of contingency to the Current Control Budget where this is explicitly identified within the Change Proposal. The Trend Categories (Section 6.1) determine which contingency budget funds the change.

Amounts relating to Indirect Costs will be released to the CEO contingency. Authority to spend against these amounts must be obtained separately from IRG.

5.5.2 Project and Sector Contingency (Post Investment Authority)

The Investment Authority process provides the Project Manager with the Investment Authority for the contract which includes an allocation of Project (and Sector) Contingency to fund risk events which may ultimately impact on the contract. Holding contingency at project level provides the Project Manager with the agility to make best use of the available funds in managing the project as a portfolio of contracts.

The Project Contingency will be held at project level for the Project Manager to draw down via Budget Transfer (Section 5.3) into contracts, through the raising of Trends (Section 0). Once a Trend is resolved, the Project Manager has authority to instruct commitment under the contract.

The initial Investment Authority process also re-sets the Current Control Budget to match the Investment Authority (subsequent adjustments to Investment Authority may not result in changes to the Current Control Budget).

The Project Manager is able to allocate the Project Contingency to contracts as risks and changes materialise. The Project Manager cannot however exceed any individual contract Investment Authority (including the Project Contingency) as sanctioned via the Investment Authority process.

The Project Manager will be responsible for establishing a realistic forecast AFC and for determining how best to utilise his Project Contingency in order to mitigate the impact of AFC increases. In parallel with this the Project Manager must monitor the rate at which Project Contingency is being drawn down into contracts to ensure that sufficient Project Contingency remains available for the remaining works within the project.

6 Reference Documents

6.1	Trend Categories and Contingency Funding Sources	28
6.2	Programme Baseline Change Process	30
6.3	Trends Process	31
6.4	Scope Transfer Process	32
6.5	Investment Authority Process	33
6.6	Management of Forecast against IA Process	34
6.7	Change Proposal and Investment Authority Governance	35
6.8	Trend Review Meetings	38
6.9	Guidance on Number Conventions	39

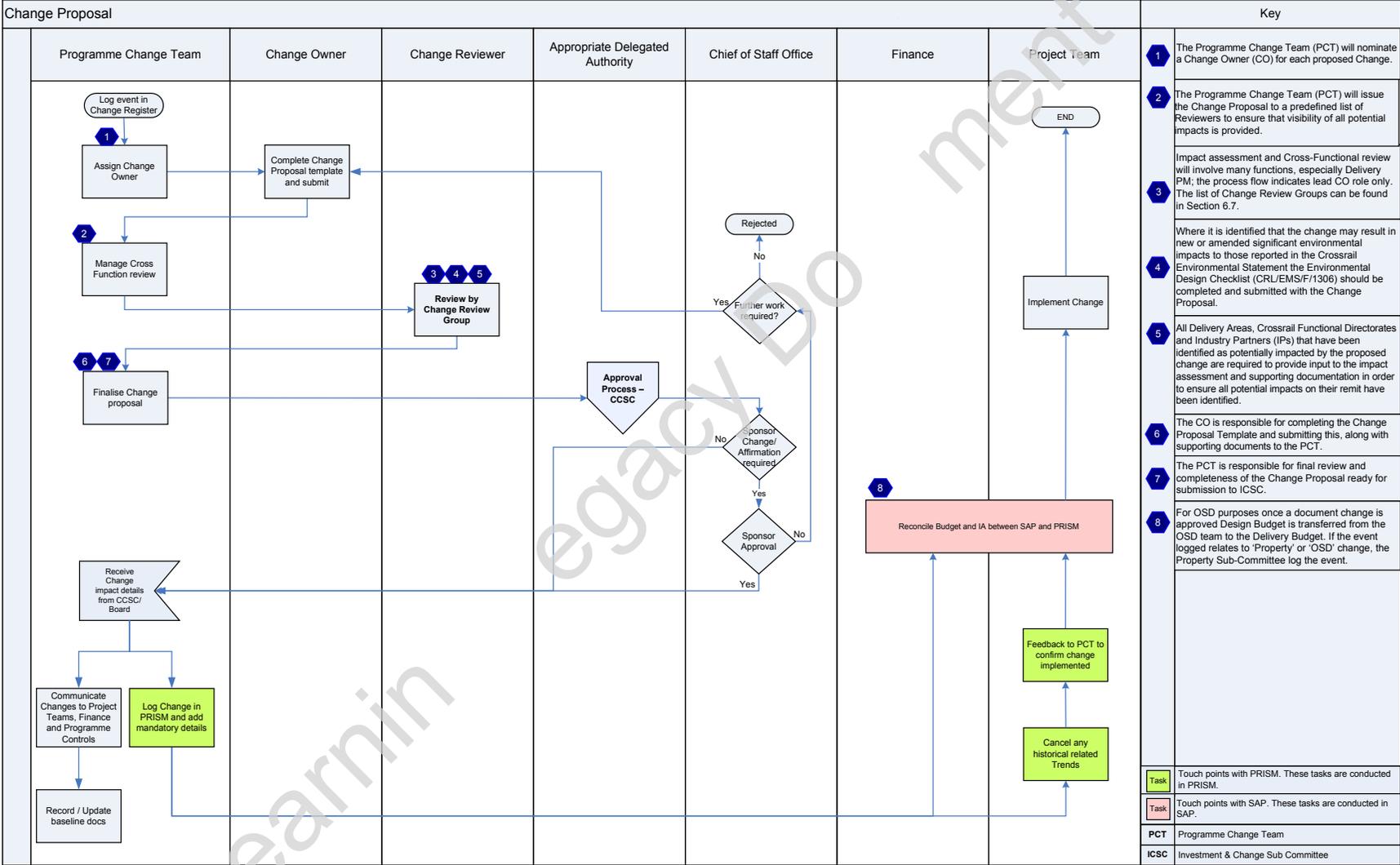
Ref:	Document Title	Document Number:
1.	Contract Administration Manual	CRL1-XRL-W-GML-CR001-50001
2.	Cost Management and Forecasting Procedure	CR-XRL-Z9-GPR-CR001-00010
3.	Delegated Authority Register	CR-XRL-V-GPR-CR001-00003
4.	Commercial and Change Sub-committee Terms of Ref	CR-XRL-Z6-STP-CR001-50026
5.	Procedure for Investment Appraisal	CRL1-XRL-V-GPD-CR001-50001
6.	Project Development Agreement	CR-XRL-Z8-AAG-CR001-50178
7.	Programme Assumptions Register	CR-XRL-Z9-GGG-CR001-00002
8.	Programme Controls Glossary of Terms	CR-XRL-Z3-MDA-CR001-50019
9.	Programme Schedule Management Procedure	CR-XRL-Z9-GPR-CR001-00006
10.	Scheme of Authorities	CR-XRL-Z6-GPR-CR001-00003
11.	Scope Book	CRL1-XRL-N2-RSW-CR001-00001
12.	Scope Book Change procedure	CR-XRL-Z9-GPD-CR001_Z-50001
13.	QRA procedure	CR-XRL-Z9-GPD-CR001-50004
14.	Procurement Code	CRL1-XRL-V3-GUI-CR001_Z-50004

6.1 Trend Categories and Contingency Funding Sources

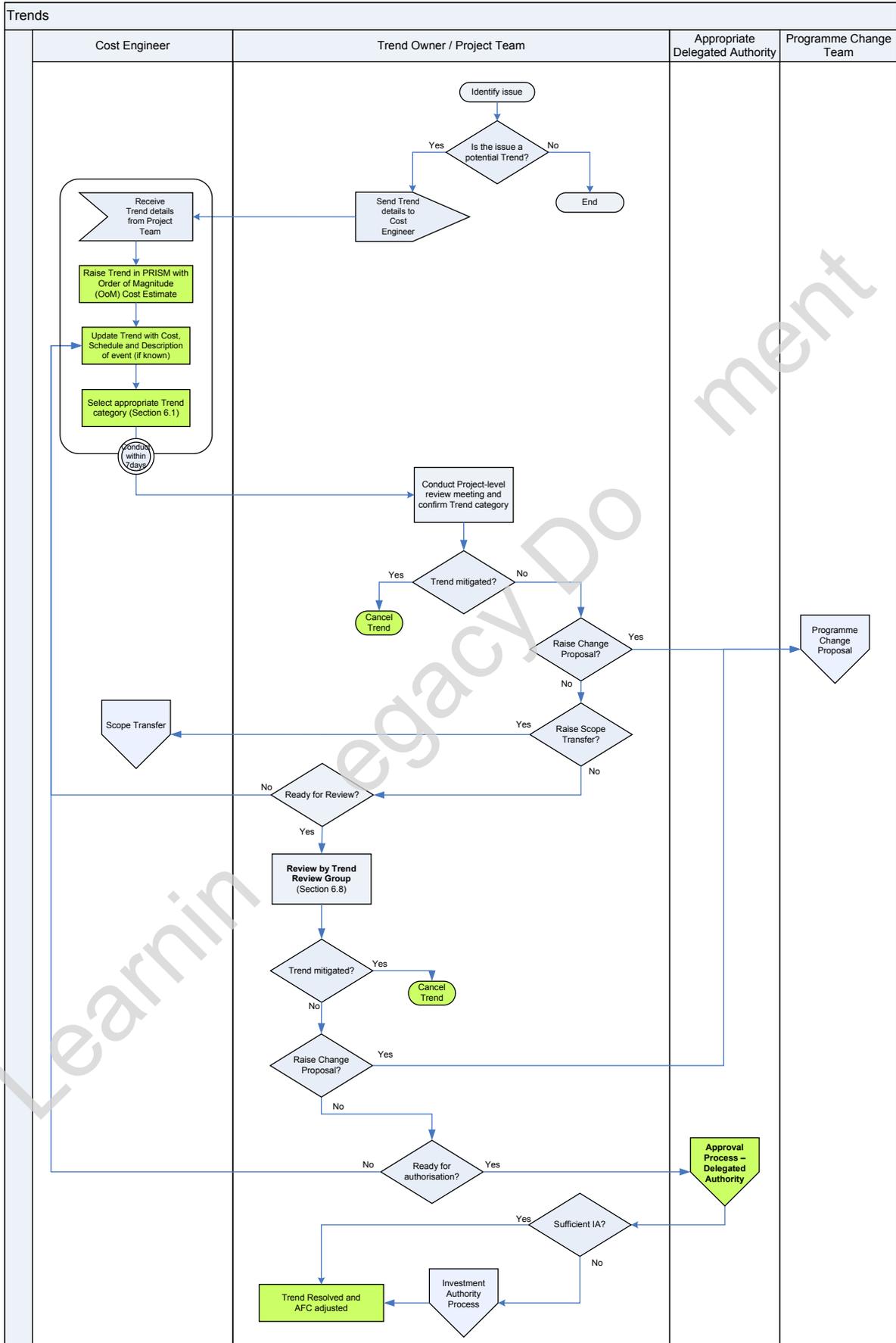
Description of Trend	Crossrail Contingency Funding Source	Prism G2 System Description	Prism Code
An adjustment that will also impact funding, budget or forecast. To be used by Programme team only	Not Applicable	Data Adjustment (Do not use, Administrator only)	ADJU (Admin only)
Budget Transfer between contracts	Not Applicable	Transfer between contracts	SCOT
<ul style="list-style-type: none"> Change in scope or execution originated by sponsors Material Event (i.e. Change in law, excess inflation) Failure of CRL or Industry Partners Railway service performance Operations procurements Force majeure 	Sponsor	Sponsor Change	SPOC (Admin Only)
<ul style="list-style-type: none"> Catastrophic events not connected to our works Failure of CRL Executive Strategic relationships with Government, Sponsors, stakeholders and partners Unfunded Sponsor changes or unfunded Material Events Board instructed scope change Further categories of risk as agreed 	Programme (or Board if approved)	Scope Change	SCOC
Catastrophic events connected to our works	Programme	Catastrophic Event	CAEV
Failure to secure global approvals from Industry Partners for design or asset acceptance		NR Infrastructure Management Acceptance	NRIM
Failure to secure global approvals from Industry Partners for design or asset acceptance		LU Infrastructure Management Acceptance	LUIM
Failure to secure global approvals from Industry Partners for design or asset acceptance		RfL Infrastructure Manager Acceptance	RLIM
'Extra-ordinary' delivery risks not included within Project's (e.g. Significant ground condition impacts, asbestos, logistics etc.)		Extra-ordinary Delivery Risk	EXOR
Design Development		Design Development : Design Activities	DDEV
Construction impact of design risks including: -Design development pre IFC issue -Inaccuracies /incompleteness /inadequacy of Design -CAT III checking		Design Development : Construction Impact	CIDD
A Programme Level change resulting from external party actions (e.g. Olympics)		External Party Actions : Programme Level	EXPA
Failure to provide property and access		Property and Land Access	PROP
Programme instructed schedule change		Schedule mitigation	SCHD
Design interface between Sectors		Sector design interface	INTF
Impacts of Over-Site development changes upon FDC design, and/or delivery budgets		Over Site Development : Project Impact	OSDP
		OSD Indirect Budget	Over Site Development : Design Costs
Interface between Projects within Sector including schedule, design and site management interfaces	Sector	Interface between Projects within a Sector	PRJI

Scope omission within Sector or Project		Inter Project / intra Sector Scope Omission	IPSO
Design change / co-ordination to facilitate delivery		Sector funded design change	ADEV
Handover to Infrastructure Managers or Operators		Handover	HDVR
Design change / development under £250k		Project level design change	PDEV
Any risk not allocated to any other party	Project	General Delivery risk	GENR
Commercial adjustments for liquidated damages, bonds etc, which impact the ECC. Not to include pain / gain adjustments which are not to be Trended. Normally only used at contract completion.		Commercial adjustments (Do not use, Administrator only)	ECCA
Delayed access caused by LU		LU delayed access	LUAC
Delayed delivery by LU		LU delayed delivery	LUDD
Delayed access caused by NR		NR delayed access	NRAC
Delayed delivery by NR		NR delayed delivery	NRDD
Delayed access caused by RfL, LO, DLR.		RfL delayed access	RLAC
Delayed delivery by RfL, LO, DLR, or RSD contractor		RfL delayed delivery	RLDD
Delayed delivery by interfacing contractor		Interface contract delayed delivery	ICDD
Interface between Contracts within Project		Interface between Contracts within a Project	CONI
Change / delay to SPS contracts caused by Systemwide contract (other than Programme funded design interface / change)		Delivery interface with Systemwide	SWDI
Change / delay to Systemwide contracts caused by SPS contract (other than Programme funded design interface / change)		Delivery interface with Stations Portals Shafts	SPSI
Failure to provide timely and accurate information to the Contractor		Late or inaccurate Information provided to the Contractor	INFO
Late design not supporting the construction schedule		Late Design	LDES
Interface with third parties at project level		Interface with Third Parties at a Project Level	TPYI
Inter-contract scope omission (intra-project)		Inter Contract Scope Omission (intra project)	ICSO
Consequences of OCI or Value Engineering (including design activities)		Consequences of OCI / VE	COCI
Unforeseen Site conditions		Unforeseen Site Conditions	USCO
Contractor and supply chain performance	Contractor	Contractor and Supply Chain Performance	LDEL
Production rates		Production Rates	LABR
Change to material and subcontractor prices		Change to Material and Subcontractor Prices	CMSP
Contractor design change, no change to contract price		Contractor design development	COND
<ul style="list-style-type: none"> Impact on local stakeholders Construction quality Contract/ site management Delivery in accordance with contractually accepted programme Contract specific risks 		Cost Over / Under Run	COUR

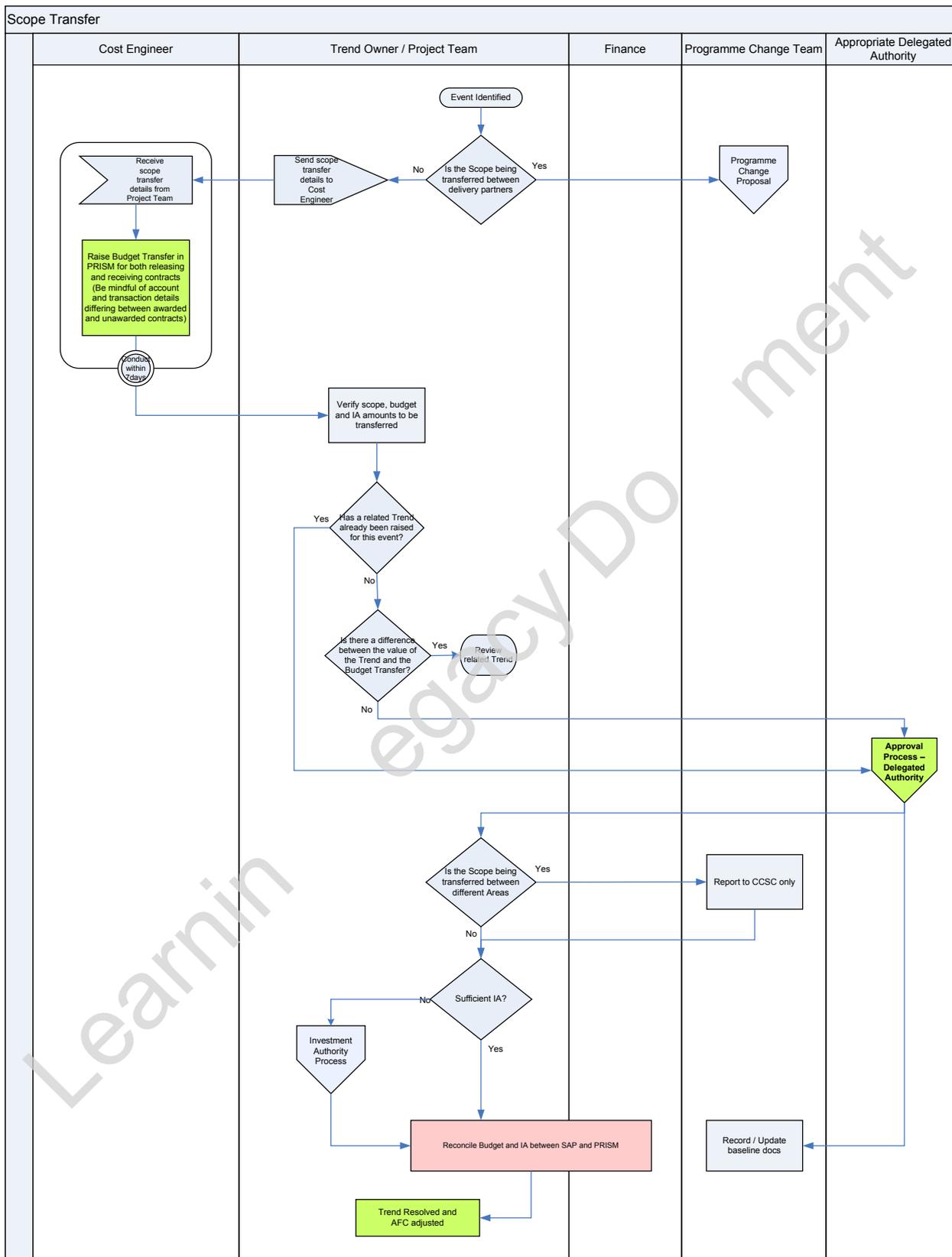
6.2 Programme Baseline Change Process



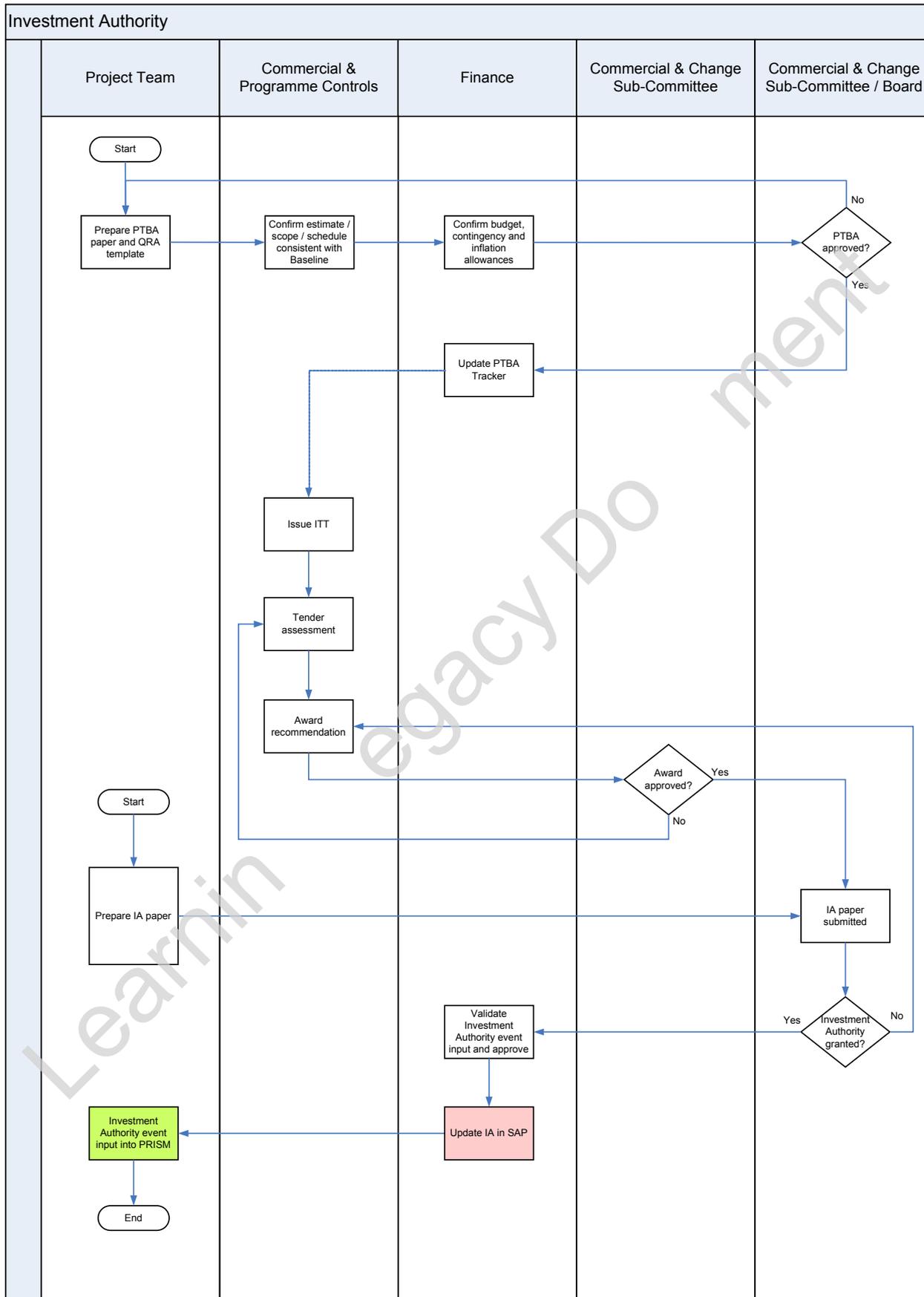
6.3 Trends Process



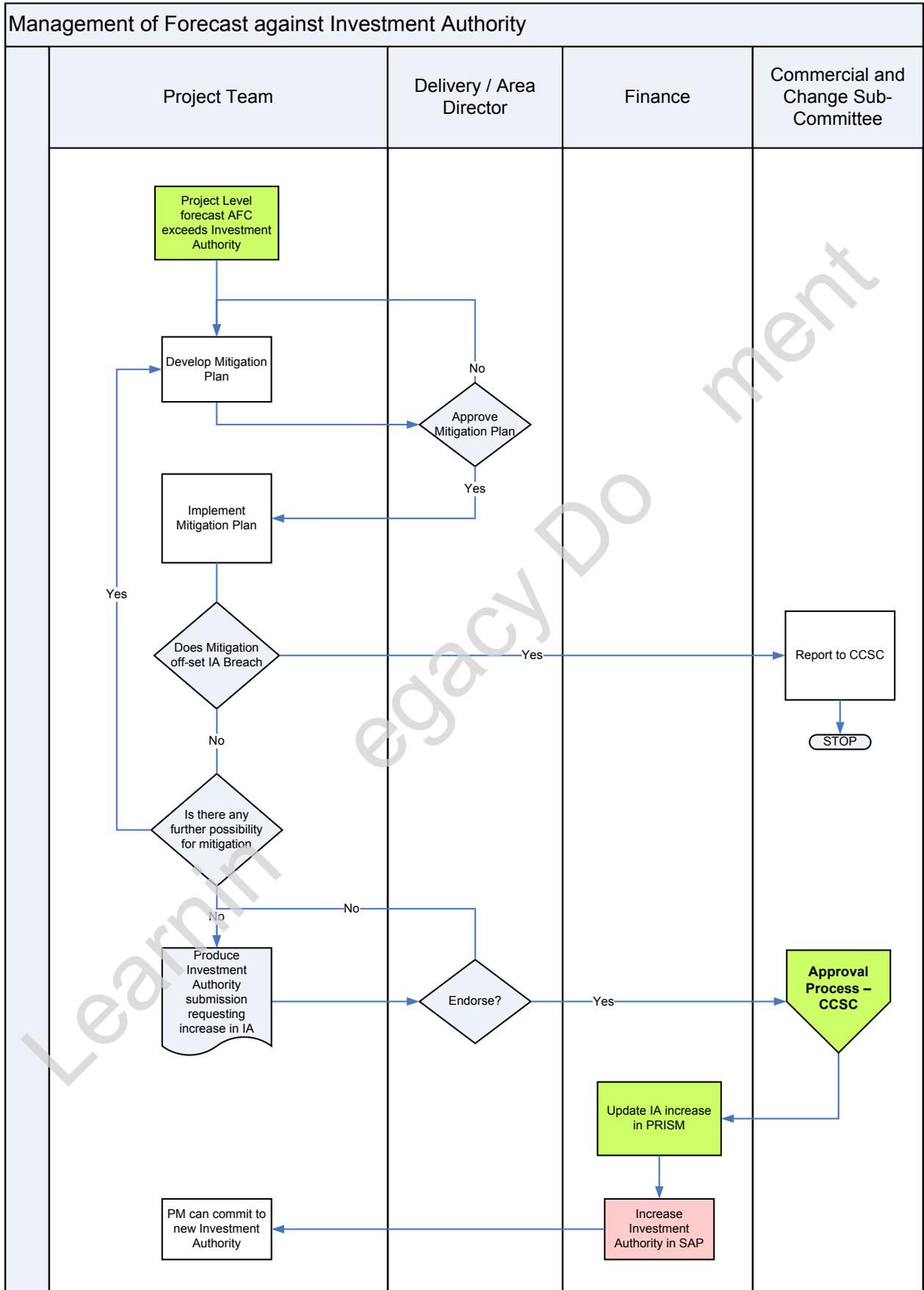
6.4 Scope Transfer Process



6.5 Investment Authority Process



6.6 Management of Forecast against IA Process



6.7 Change Proposal and Investment Authority Governance

Change Proposals and Investment Authority requests must be drafted and issued for review in a timely manner such that they can be finalised and submitted when required. The programme change control timetable is given in Section 6.7.5.

In order to improve the quality of Change Proposals, Review Groups will be held prior to the paper being submitted for endorsement. The reviews will inform the Change Proposal thereby providing more comprehensive and accurate information to support decisions made at CCSC.

The Review Groups will be chaired by the Head of Change Control, attendees will be senior Crossrail managers responsible for the relevant disciplines, as advised by the Head of Change Control.

The Author of the Change Proposal (the Change Owner) must attend the Technical and Client Review Groups (TCRG), and Finance and Controls Review Groups (FCRG) to present the paper and receive feedback and actions first hand in order to update the paper prior to submission for endorsement.

Investment Authority Requests do not need to be presented to the Review Groups. However, they will be subject to the Pre-CCSC Review.

For more details, refer to the Terms of Reference for Programme Change Control Meetings on SharePoint.

6.7.1 TCRG and FCRG Review Groups

The TCRG and FCRG Review Groups are held on the Monday afternoon of Weeks 2 and 4 of the reporting cycle. Papers will usually be sent out by lunchtime Thursday previous. The Change Owner must attend (by phone if necessary) both Review Groups to present the paper and receive feedback and actions first hand in order to update the paper prior to the next submission on the following Wednesday.

Change Papers will be circulated to all Members and Reviewers, Project Planners, ACMs, ABMs and ACCDs for review.

TCRG reviews and agrees items included within the Change Proposal that impact on the technical concept, Functional Requirements, operational readiness, Sponsors Requirements, On Network Works, external stakeholders, commercial and health and safety matters.

FCRG reviews and agrees items included within the Change Proposal that impact on budget, cost, forecast, the Master Control Schedule, project interfaces, risk and QRA. It will review costs associated with the change proposal and confirm whether these costs are appropriate and reasonable. FCRG also will agree the funding source of the change in line with the contingency funding sources and trend categories as published in the Change Control and Budget Management procedure.

6.7.2 Pre-CCSC Review

The Pre-CCSC Review is held on the Monday afternoon of week 1 and 3 of the reporting cycle. Papers will usually be sent out by cob Thursday previous. The Change Owner / Investment Authority Owner is not required for this review, any feedback and actions will be captured by the Programme Change Team, to be completed by 4pm the following day (Tuesday).

Pre-CCSC conducts the final review of the proposals and provides the final recommendation to CCSC.

6.7.3 Signatures

The Programme Change Team will present the papers to the signatories on Wednesday and Thursday, week 1 and 3. Papers will be sent out by cob Tuesday. The responsibilities of the signatories can be found on the signatures page on the change template, and include checking the general quality of the change paper. Change Papers which do not have full signatures will not be accepted by the Secretariat, and will not be included in the CCSC pack.

6.7.4 Commercial & Change Sub-committee (CCSC)

Change Papers and Investment Authority Requests are submitted to the Secretariat on Thursday week 1 and 3, prior to the CCSC pack review. An agenda will be issued to the Proposal Owners usually on Friday, for the CCSC meeting the following Wednesday. Each proposal will be presented by the Proposal Owner if required (who may attend by telephone) and must be supported by the Sponsor of the Proposal. A representative of the designer must attend for design related change. The approved Proposal Papers will be issued to the Proposal Owners and Programme Controls Cost Manager for implementation, once draft CCSC minutes are received (usually the following week).

6.7.5 Programme Change Control Timetable



Programme Change Control Timetable
April 2015

Legend

- Programme Change Team
- Inputs from Reviewers
- Change Owner

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
-1 Week (Week 4)	Draft Change Proposal Submitted for review (Change Owner)			Issue Agenda & Change Proposals to Review Groups (Prog. Change Team)	£100k Trends Review (Prog. Change Team)	PERIOD END
+1 Week	Investment Authority Request Submitted for review (Change Owner) Technical / Operations Review Group Finance and Controls Review Group		Change Proposal finalised (Change Owner)	Issue Agenda & Change Proposals for Pre-CCSC (Prog. Change Team)		
+2 Week	Pre-CCSC Review Group	Change Proposal finalised (Change Owner) Issue CCSC papers for Signature (Prog. Change Team)		Issue CCSC papers to Secretariat (Prog. Change Team)		
+3 Week		CCSC Present Paper at CCSC (Change Owner)				
+4 Week						PERIOD END
+5 Week (-4 Week)	Issue Approved Change to Change Owners (Prog. Change Team)					

Note: Only one change cycle shown for clarity. Change Cycle functions on a 2-week cycle. Change Proposals must be submitted by 9am Mondays Week 2 and 4, for decision at CCSC on Tuesdays Weeks 1 and 3 (3 weeks later). Investment Authority Requests must be submitted by 9am Mondays Week 1 and 3. Approved Change Papers will be issued for implementation once the draft CCSC minutes are received.

6.8 Trend Review Meetings

6.8.1 Design Trend Meeting

Objective:	Reviews newly raised design development Trends, identifies appropriate mitigating actions and agrees resolution of design contract trends and impact of changes.
Meeting Frequency:	Weekly
Chair:	Chief Engineer
Meeting Mgr:	Design Cost Engineer
Attendees:	Engineering Manager, Project Engineers

6.8.2 Project Trend Meeting

Objective:	Reviews project Trends, identifies mitigation actions and agrees resolution of Trends <£100k
Meeting Frequency:	Weekly
Chair:	Project Manager
Meeting Mgr:	Project Cost Engineer
Attendees:	Project Manager, Project Cost Engineer, Project Engineer, Project Planner

6.8.3 Sector Trend Meeting

Objective:	Reviews Sector Trends and agrees resolution of Trends <£500k
Meeting Frequency:	Bi-Weekly
Chair:	Sector Director
Meeting Mgr:	Sector Business Manager / Sector Cost Manager
Attendees:	Project Managers, Project Cost Engineers, Project Engineers

6.8.4 Programme Trend Meeting

Objective:	Reviews Trends with Programme Contingency impact >£100k and Delivery Contingency impact >£500k and agrees appropriate mitigating actions and recommends resolution of changes to Central Section Director, Programme Controls Director and CCSC depending on Trend value.
Meeting Frequency:	Bi-Weekly
Chair:	Programme Controls Director (Head of Change Control alternate)
Meeting Mgr:	Estimating Manager
Attendees:	Sector Business Managers, Sector Cost Managers, Technical Cost Managers, Head of Change Control, Programme Change Manager

6.9 Guidance on Number Conventions

1. Budget increases and budget transfers will be calculated to the nearest £000, or to a higher number of significant figures.
2. The only exception to this will be budget transfers to clear an account to nil, in which case it may be necessary to express the figures down to pounds or pence.
3. Figures quoted in the body of change papers in text or tables will normally be stated as £million up to two decimal places. They will never be quoted at a level more detailed than £000.
4. Tables will be headed by a £ sign, indicating the units: £m, £000 etc. Figures in tables will not have a £ sign against each figure.
5. The Current Financial Status and the Trends / QRA tables will be stated in £m.xx (two decimal places).
6. The Budget Changes Proposed table (which is the definitive source of the Prism entries) will be stated in £'s. As per 1 above, the figures will normally be £000s, e.g. £2,237,000 or £2,200,000. Pence will only be shown where 2 above applies, i.e. it is necessary to clear a Prism account.
7. As with all conventions, the above may be varied for good reason.

7 Standard Forms / Templates

Ref:	Document Title	Document Number:
A.	Programme Change Proposal Form	CR-XRL-Z9-ZFM-CR001_Z-50001
B.	Investment Authority QRA template	CRL1-XRL-V2-GPD-CR001_Z-50001

Learning Legacy Document