ICL Pathway	ICL Pathway Development Directorate Incident/Defect Management	Ref:	DE/PRO/015
		Version:	1.0
	COMMERCIAL IN CONFIDENCE	Date:	25/10/00

Document Title: **ICL Pathway Development Directorate Incident/Defect Management**

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Abstract: This document describes the ICL Pathway Development Directorate Incident/Defect Management process

Document Status: APPROVED

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0.0 Document Control

0.1 Document History

Version No.	Date	Reason for Issue	Associated CP/PinICL No.
0.1	12/06/00	First Draft for Review (not in PVCS)	N/A
0.2	11/09/00	Draft for review	N/A
0.3	4/10/00	Draft for Review	N/A
0.4	15/10/00	Final Draft	N/A
1.0	25/10/00	APPROVED	N/A

0.2 Approval Authorities

Name	Position	Signature	Date
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0.3 Associated Documents

Reference	Version	Date	Title	Source
CM/MAN/005			PinICL Reference Data Guide	ICL Pathway
CS/PRD/074			CS Incident Management Process	ICL Pathway
CM/PRD/001			Software Configuration Management Version control process	ICL Pathway
CM/PRD/003			Work Package Request Process	ICL Pathway

CM/MAN/009			PinICL Training Manual	ICL Pathway
DE/PRO/003			ICL Pathway Development Directorate Processes	ICL Pathway
PA/PRO/001			Change Management Process	ICL Pathway
PA/PRO/014			Pathway PinICL Problem Management Process	ICL Pathway
PA/PRO/016			ICL Pathway Development Directorate Problem Management Process	ICL Pathway

Note: Unless a specific Version and Date is referred to above, reference should be made to the current (Approved) Version of the document.

0.4   Abbreviations/Definitions

Abbreviation	Definition
SSC	System Support Centre
SMC	System Maintenance Centre
CCD	Contract Controlled Documents
PPD	Process and Procedure Description
HSH	Horizon System Help Desk
RMF	Release Management Forum
QFP	Quality Filter Process
CP	Change Proposal
CCN	Change Control Note
CR	Change Request
SPTS	Service Provision and Technical Support
PIT	Product Integration Team
TI	Technical Integration
OSD	Operational Services Division
QFPF	Quality Filter Process Forum
OTT	Operational Test Team
WP	Work Package
KEL	Known Error Log
KPR	Known Problem Register

PinICL	An ICL system used by Pathway for Incident/Defect Management. Modified for ICL Pathway by Application Management.
PVCS	A proprietary Configuration Management System used by ICL Pathway and developed by Merant International Ltd
CS	Customer Service - A Directorate within ICL Pathway
CM	Configuration Management
DU	Delivery Unit - Development Directorate organisational unit responsible for developing products
DM	Delivery Unit Manager
Call	A term used to reference the Incident/Defect record held in PinICL
Incident	An observed difference between expected and actual behaviour of a Pathway Product captured in the PinICL System
Defect	An agreed difference between designed and actual behaviour of a Pathway Product
Fix	An Incident that has resulted in a software correction to a Pathway Product
B&TC	Business and Technical Conformance
Call Logger	Originator of the Incident
Stack	A term used to identify a holding area of Incidents in the PinICL System. Generally relates to a team name or function eg QFP Stack
TDA	Technical Design Authority
Customer Requirements	A Directorate within ICL Pathway
R'qmts	A term used for business requirements (used in diagrams)

0.5   Changes in this Version

Version	Changes
0.1	General update to all areas. Revised Process Flows
0.2	General update to all areas. Revision to process flows.
0.3	General update to all areas to reflect comments obtained at 0.2. Measures now withdrawn from process template.
0.4	Minor updates to text, typographical errors and consistency. Added reference to CS ownership of processes in 2 Scope Added reference to Live Calls in 4.1.2 Process rationale Minor changes to all process flows

	Correction/improvement to Change Management process flow. Changes to Target Release Assignment process flow and additional wording. added to process rationale for Live Calls.
1.0	APPROVED Issue -Minor updates to text.

0.6   Changes Expected

Changes
Changes are expected to be made to:
Reflect further improvements (as required) to the processes identified, their integration with other ICL Pathway processes and the specified standards.

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Table of Contents

1 Introduction

This document describes the ICL Pathway Development Directorate Incident/Defect Management process. It supersedes and replaces PA/PRO/014 (Pathway PinICL Problem Management Procedure).

The process has been decomposed and the following Sub Processes identified:

- Incident capture
- Quality Filter Process
    - o Incident Analysis
    - o Change Management Actions
    - o Solution Components
- Incident Closure
- Target Release Assignment
- Defect Resolution
- Defect Test and Closure

The document has been organised in three sections:

Section 2.0 describes an end-to-end view of the process and illustrates the major owners of Incidents raised.

Section 3.0 describes a summary of the Incident/Defect Management Process, identifying; sub processes, process flows, inputs and outputs.

Section 4.0 describes each sub-process identifying; process flows, inputs and outputs

A process flow diagram and a process flow description have been produced for each component using a standard format.

2 Scope

The process recognises two major threads of ownership for Incidents raised:

- **Customer Service** for Incidents generated from the live service and associated activities e.g. Live Calls, Reference Data Team, OSD and Operational Test Team.

- **Development** for Incidents generated by: Business and Technical Conformance during planned testing activities; and likewise for Delivery Units during planned testing activities.

End-to-End Ownership (Threads)

End-to-End Threads - raise incidents and monitor progress through to closure (as either Incidents or successfully tested Defects).
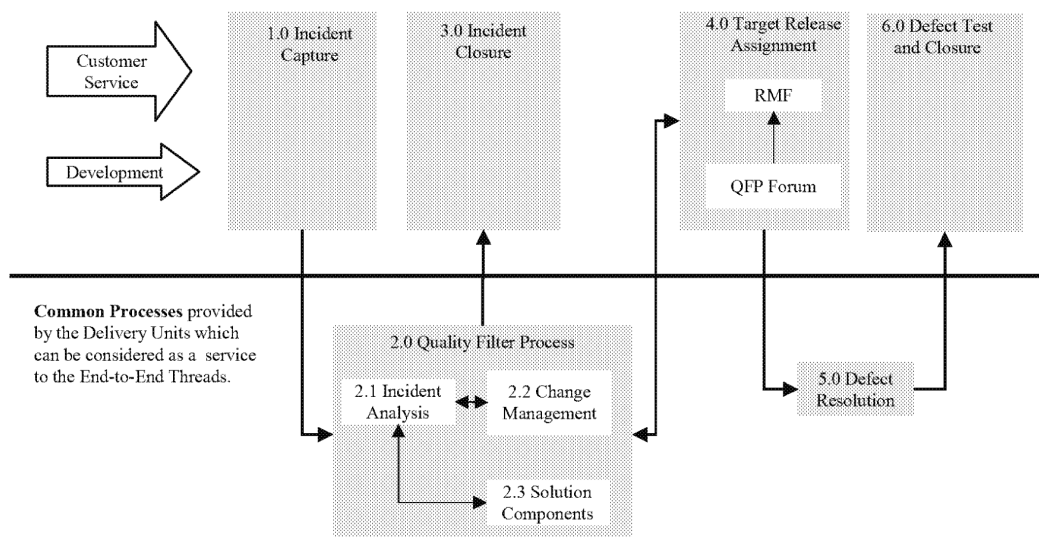
Two sub–processes are also established as services to these End-to-End Threads:

- Quality Filter Process.
- Defect Resolution.

As illustrated above.

For completeness and to facilitate understanding of the end-to-end nature of the process all components have been described. However, many of the components will be complemented by local work instructions or replaced by other processes such as with the Customer Service Incident Management for Incident Capture.(CS/PRD/074).
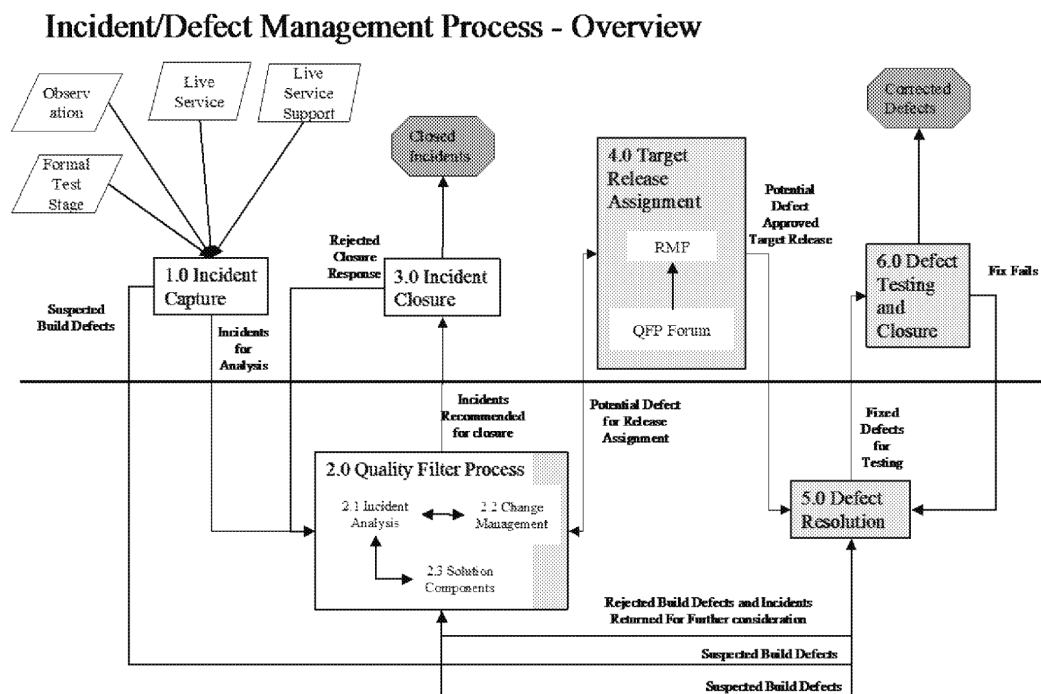
It should also be noted that Customer Service has their own processes covering: Incident Capture; Incident Closure; Release Management Forum; and Defect Test and Closure.

The process flow diagrams also include steps required to update information in PinICL, which is the ICL Pathway tool for Incident/Defect Management. Principally it is the Response Codes and ensuring that the correct Product and Product Group are selected that are referenced.

3 Incident/Defect Management Process

3.1 Overview

3.1.1 Process Flow

Incident/Defect Management Process – Overview

3.1.2 Process description

Process Owner:	Development Director.
Process Objectives:	To capture differences between expected and actual behaviour of Pathway Product.
	To analyse these differences and resolve any resulting defects to product.
	To determine a suitable Target Release for any resulting defects.

Process Rationale:	The process is built on the fundamental that only the Call Logger of the Incident or a member of the same team is permitted to close. Incident Closure and Defect Test and Closure are the Sub Processes that verify if the documented conclusions have satisfied the Incident as stated. Incidents originating from the live service are managed in cooperation with Customer Service with the Release Management Forum authorising any change to Target Release. A comprehensive record is maintained through out the life of the Incident/Defect and all decisions catalogued. The PinICL system provides the mechanism for achieving this audit log
Inputs/Triggers:	Formal test stage. Live system use. Live system operation. Observation. The trigger is the observation of a difference between expected and actual behaviour of a Product or Service.

Sub Processes:	1.0 Incident capture.
	
	2.0 Quality Filter Process.
	
	       2.1 Incident Analysis.
	
	       2.2 Change Management Actions.
	
	       2.3 Solution Components.
	
	3.0 Incident Closure.
	
	4.0 Target Release Assignment.
	
	5.0 Defect Resolution.
	
	6.0 Defect Test and Closure.

Resources:	Potentially all Pathway Programme Staff, but mainly: Delivery Unit Managers. CS staff responsible for operation and support. B&TC and CS Managers responsible for Test stages. B&TC and CS Managers responsible for releasing product to the live estate. Programme and Directorate Management Teams.
Outputs:	Closed Incidents Closed Defects.

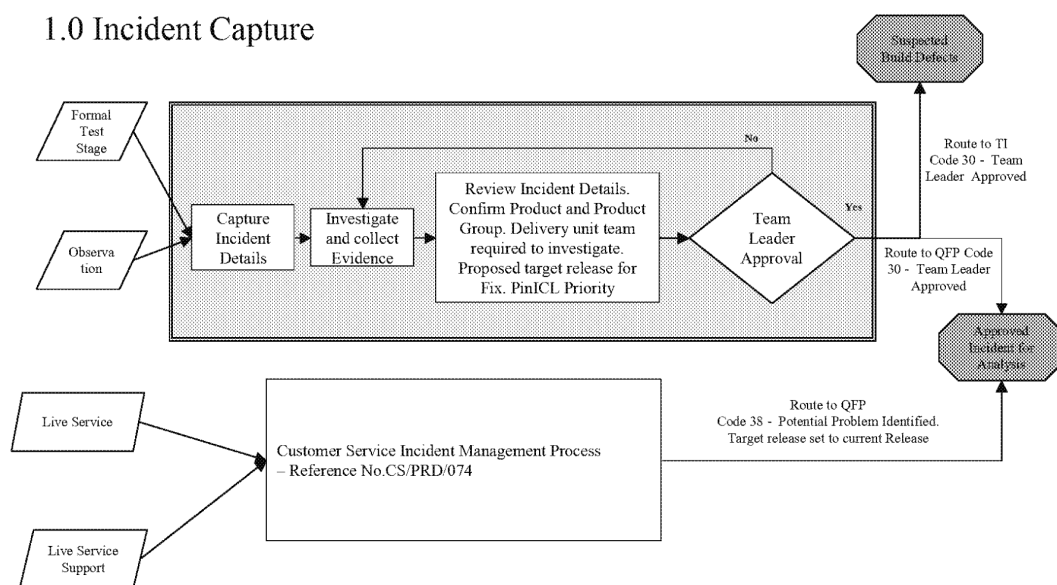| ICL Pathway	ICL Pathway Development Directorate Incident/Defect Management COMMERCIAL IN CONFIDENCE	Ref: DE/PRO/015 Version: 1.0 Date: 25/10/00

Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4 Process Components

4.1 Incident Capture

4.1.1 Process Flow

1.0 Incident Capture

4.1.2 Process Description

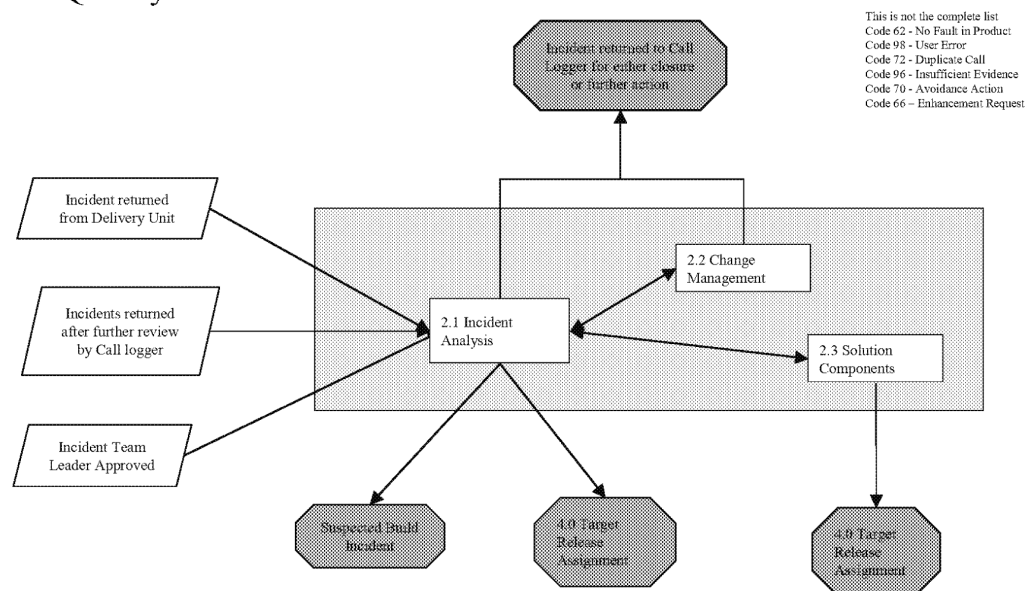| Process Owner:	Manager, Delivery Units. B&TC Manager CS Manager (is a separate CS process)
Process Objectives:	Provide an approved Incident for analysis

Process Rationale:	Any member of Pathway's staff can originate an Incident.
	The Incident needs to be supported by evidence and a description of the circumstances under which it was observed.
	Local Management needs to approve the Incident prior to passing it on to the Quality Filter Process for analysis.
	Vast majority of Incidents captured originate from scripted testing or from the live service.
	Live service Incidents arrive with the target release set at the current release.
	All other Incidents have the target release set to unknown but the text should be updated to include a recommendation for release.
Inputs/Triggers:	Formal Test Stage.
	Live Service.
	Live Service Support
	Observation.
	The trigger is the formal description of the Incident and associated evidence.
Sub Processes:	None
Resources:	Potentially all Pathway Programme Staff, but mainly:
	B&TC Staff who undertake testing
	Delivery Unit Staff who undertake testing
	CS Staff who undertake testing
	CS Staff that support the live estate
Outputs:	Approved Incidents for analysis.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.2 Quality Filter Process.

4.2.1 Process Flow

                Incident/Defect Management

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2.0 Quality Filter Process

4.2.2 Process description

Process Owner:	Manager, Delivery Units.
Process Objectives:	Minimise the time spent in analysis for each Incident. Improve the effectiveness of isolating product defects. Identify change management issues. Provide guidance on the areas to be considered and the decisions required.

Process Rationale:	The process is operated under the control of the Incident/Defect Manager.
	QFP Representatives are identified for each of the Delivery Units.
	QFP Administration maintains a list of these representatives.
	QFP Administration assigns Incidents to the QFP Representatives for analysis.
	The QFP Representatives are responsible for ensuring that either the Incident is recommended for closure or a potential product defect is identified.
	If the Incident has been incorrectly assigned it is returned with a recommendation as to where it should go.
	As Incidents are routed for analysis onto the QFP Stack the QFP Representatives are expected to identify Incidents relevant to their own product areas and not wait until the Incident is assigned by QFP administration.
	This is a fast moving process and the emphasis is on appropriateness, consequently the steps indicated in the Process and Sub Processes can and do happen in a different order to that shown.
	The QFPF also can happen at different times during the process and if required Incidents are reviewed more than once.
Inputs/Triggers:	Approved Incidents.
	Incidents returned after further review with Call Logger.
	Incidents returned after defect consideration.
Sub Processes:	2.1 Incident Analysis.
	2.2 Change Management.
	2.3 Solution Components.
Resources:	QFP Representatives.
	Incident/Defect Management.
	Pathway Managers responsible for testing.
Outputs:	Incidents returned to Call Logger for either closure or further action.
	Suspected build Incident.
	Target Release Assignment.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.2.3 Quality Filter Process – Incident Analysis

4.2.3.1 Process flow

2.1 Quality Filter Process - Incident Analysis

This is not the complete list
Code 62 - No Fault in Product
Code 98 - User Error
Code 72 - Duplicate Call
Code 96 - Insufficient Evidence
Code 70 - Avoidance Action
Code 66 – Enhancement Request
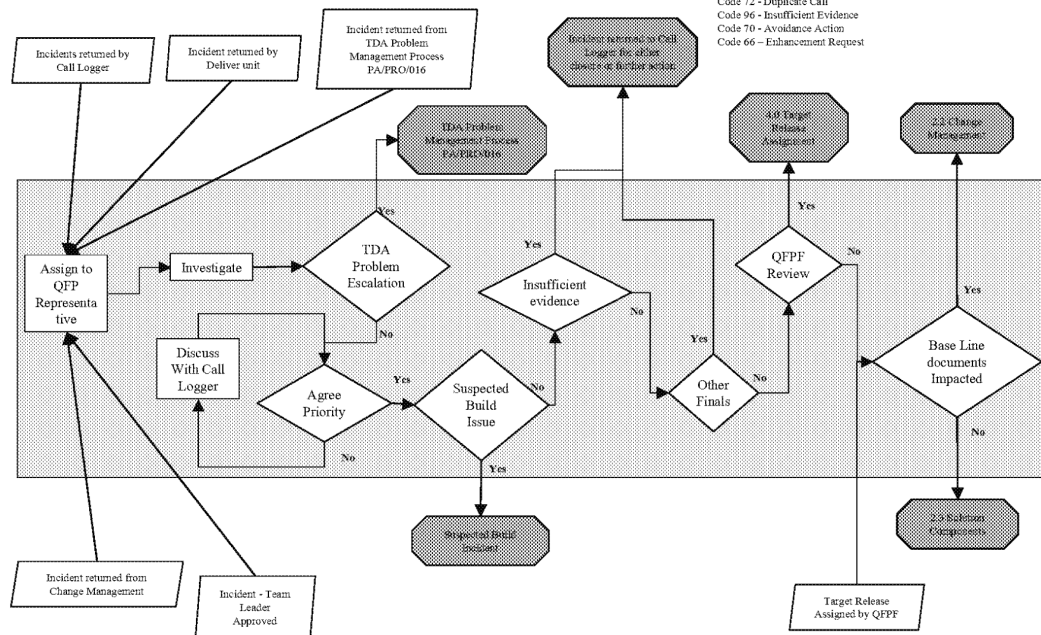
4.2.3.2 Process description

Process Owner:	Manager, Delivery Units.
Process Objectives:	Rapidly review and assess Incidents. Improve effectiveness of detailed analysis by filtering out inappropriate Incidents.

| Process Rationale:	Initial investigation is undertaken.
	
	If the QFP Representative believes this Incident or this Incident plus others reveals a design weakness then it can be escalated to the TDA as a Problem and progressed in accordance with the ICL Pathway Development Directorate Problem Management Process, PA/PRO/016.
	
	The priority of the call has to be agreed and any discussions undertaken with the Call Logger if the priority needs to be changed.
	
	Suspected build Incidents are sent to TI.
	
	The Incident can be updated and returned to the Call Logger for a variety of reasons e.g.:
	
	    No fault in product.
	
	    User error.
	
	    Duplicate call.
	
	    Insufficient Evidence.
	
	The Incident can be updated and routed to the TDA if baseline documents are impacted for review under the Change Management Sub Process.
	
	The Incident can be updated and routed for further detailed review by the Delivery Unit and identification of solution components.
	
	A QFPF review is required if the Target Release has not been set or is inappropriate.

Inputs/Triggers:	Approved Incidents. Incidents returned by Call Logger. Incidents returned after defect consideration. Incidents returned from TDA Problem Management Process. Incidents returned from Change Management for further consideration.
Sub Processes:	None.
Resources:	QFP Representative. Incident/Defect Management.

Outputs:	Incidents returned to Call Logger for either closure or further action.
	Suspected build Incident.
	Incidents for Solution Components.
	Incidents for Change Management.
	Incidents for Target Release Assignment.
	Problems escalated to the TDA.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.2.4 Quality Filter Process - Change Management

4.2.4.1 Process flow

2.2 Quality Filter Process - Change Management
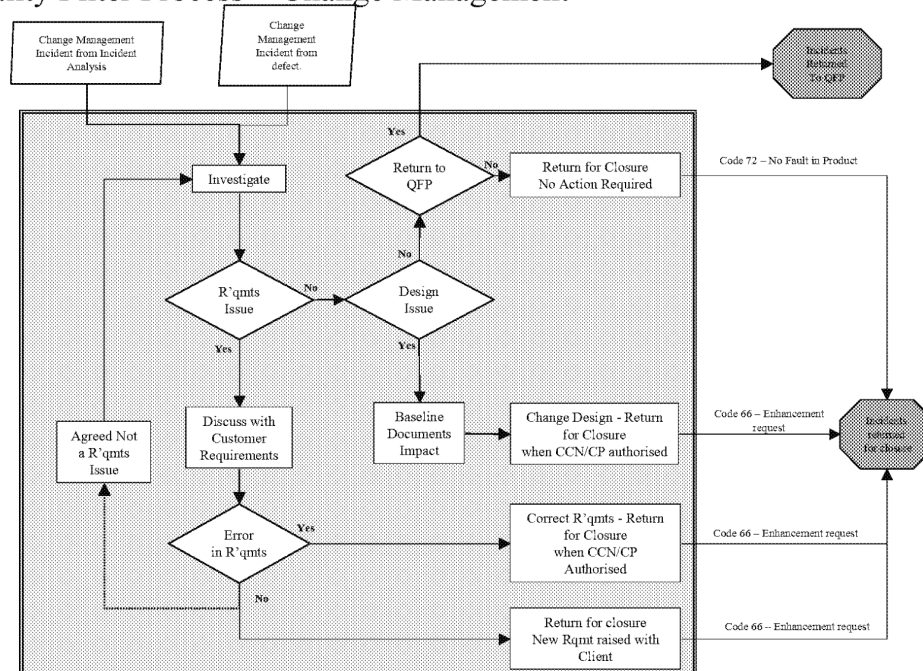
4.2.4.2 Process description

| Process Owner | Technical Design Authority. |
| Process Objectives: | Identify actions and decisions that impact Contract Controlled Documents or fundamental Specification of Requirements and Technical Design. |

Process Rationale:	The QFP Representative refers to the Technical Design Authority any Incident that brings into question the design or requirements implemented. Requirements Issues will be progressed by TDA directly with Business Requirements. Any resulting change will be in the form of a CP or CR with supporting CCN and will be progressed in accordance with PA/PRO/001 Change Management Process.
Inputs/Triggers:	Incidents that challenge the design implemented. Incidents that challenge the requirement implemented. Incidents/Defects that if corrected would cause change to Base Line Documents.
Sub Processes:	None.
Resources:	Technical Design Authority. QFP Representative. Incident/Defect Management. Business Requirements.
Outputs:	Incident returned to QFP for potential defect consideration. Incidents recommended for closure – no fault in product. Incidents recommended for closure -Essential changes to design or requirement CCN/CP. Incidents recommended for closure –enhancement being progressed with the client CR.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.2.5 Quality Filter Process - Solution Components

4.2.5.1 Process Flow

2.3 Quality Filter Process - Solution Components
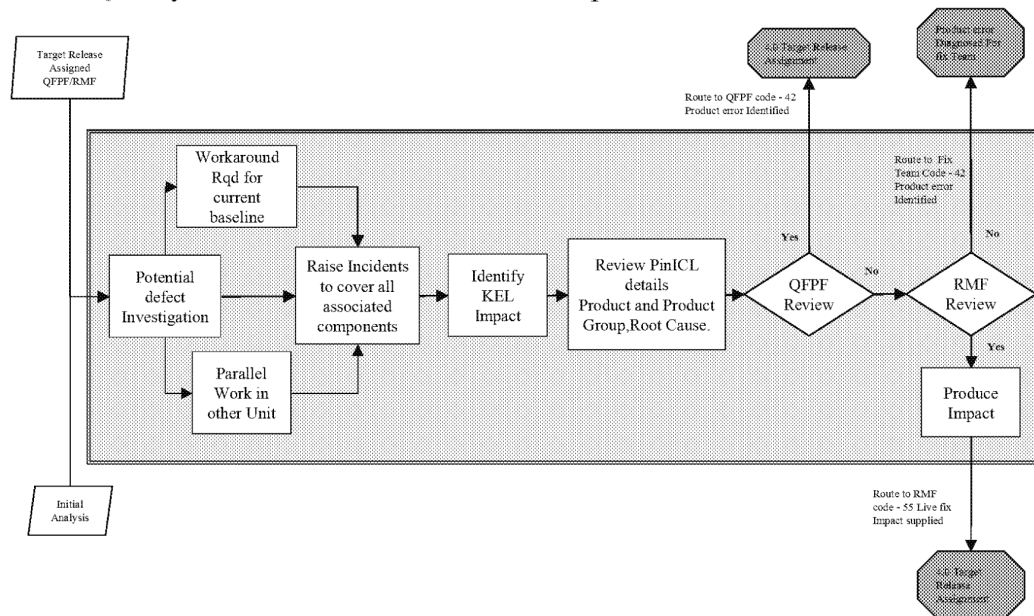
4.2.5.2 Process description

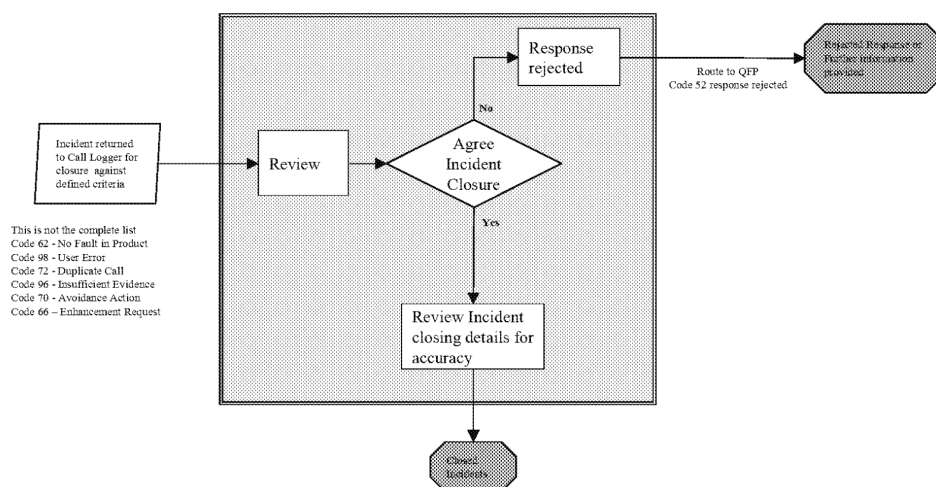| Process Owner:	Manager, Delivery Units.
Process Objectives:	Define actions needed with an identified solution and consequential actions.

Process Rationale:	The QFP Representative ensures that all solution components are identified and can be progressed satisfactorily. If appropriate, a workaround solution may be required for the current baseline as well as a longer-term solution or consequential work may be required in another Delivery Unit, which has to be worked on in parallel.
	Copy (Clone) PinICLs should be used for this task with a separate PinICL raised for each piece of work. The PinICL should be updated with a clear set of instructions so that the relationships are clear. The procedure for raising clone PinICLs is covered in the PinICL Reference Data Guide CM/MAN/005.
	Discussion with CS if a KEL entry is required or needs to be updated. The Procedure for updating/creating KELs is contained in the PinICL Reference Data Guide CM/MAN/005.
	A QFPF review is required if the Target Release has not been set or is inappropriate.
	For calls where a live fix impact has been requested an Impact statement is produced and sent to the RMF for Target Release consideration.
Inputs/Triggers:	Incident – Initial analysis completed.
	Target Release assigned by QFPF/RMF.
Sub Processes:	None.
Resources:	QFP Representative.
	Problem Management.
Outputs:	Incidents - all solution components.
	Impacted Incidents for live fix decision by the RMF.
	Incidents for Target Release consideration by QFPF.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.3 Incident Closure

4.3.1 Process Flow

3.0 Incident Closure

4.3.2 Process description

Process Owner:	B & TC Manager.
	Manager, Delivery Units.
	CS Manger. (is a separate CS process)
Process Objectives:	Verify that the actions taken to investigate the Incident have an agreed conclusion.
	Identify the steps and actions associated with Incident closure.
Process Rationale:	Call Logger is responsible for Incident closure.
	Call Logger may reject the response if not satisfied.
Inputs/Triggers:	Incidents recommended for closure.
Sub Processes:	None.
Resources:	Potentially all Pathway Programme Staff, but mainly:
	Delivery Unit Test Staff.
	B&TC Staff.
	CS Test Staff and Live Support Staff.
Outputs:	Closed Incidents.
	Incidents returned for further consideration either Response Rejected or Further Information Provided.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.4 Target Release Assignment

4.4.1 Process Flow

4.0 Target Release Assignment

4.4.2 Process Description

Process Owner:	Manager, Delivery Units. B & T C Manager. CS Manager (RMF is a separate CS process).
Process Objectives:	Ensure an appropriate Target Release is selected and approved for the delivery of the corrected defect.
Process Rationale:	Under the control of the Incident/Defect Manager interactions, are initiated across the programme to ensure the appropriate Target Release is identified and agreed. Two meetings are used to facilitate this: Release Management Forum. Quality Filter Process Forum. Typically during intense periods of formal testing, QFPF meetings will take place daily.

	The QFPF will comprise:
	Delivery Unit QFP Representatives.
	Release Managers.
	Test Managers.
	TDA Representative.
	SSC Representative.
	TI Representative.
	Incident/Defect Management are represented at the weekly CS Release Management Forum where Target Releases for designated calls originating from the live service are determined.
	QFPF review the Incidents and an appropriate Target Release identified. If a live fix is being recommended the Incident is updated requesting that a live fix impact is to be provided to the RMF for consideration.
	The Target Release consideration also takes on board any KPR impact. The KPR is produced by B&TC and indicates any Incidents outstanding from formal testing visible to the client. Each Incident on the KPR has an agreed Target Release with the Client. The KPR procedure is owned by B&TC and is identified in DE/PRO/003.
	The QFPF also provides an opportunity to arrange KEL entries with the SSC representative for agreed Incidents. The procedure for creating and modifying KELS is in the PinICL Reference Data Guide CM/MAN/005.
	At the discretion of the Incident/Defect Manager and Pathways Programme Management the QFPF review deferrals:
	System Test Incidents.
	Business Test Incidents.
	All Incidents associated with a baseline being released into the live service.
	Live calls recommended for deferral by the QFPF are sent to the RMF for approval. A clone call is arranged to progress the Incident at the nominated deferred release whilst the original is returned to the RMF for consideration. The text is updated to reflect the priority perceived with a recommendation for closure as fixed in a future release. This is either agreed at RMF (and the Incident closed by the SSC) or a live fix is requested and the Incident returned to QFP.
	Business Requirements via their QFPF representative are asked to approve all deferrals beyond the next Target Release.
	All decisions agreed by either the RMF or QFPF are recorded in the Incident.
Inputs/Triggers:	Incidents with Potential Solutions Identified.

	Live Incidents recommended for deferral
Sub Processes:	None.
Resources:	Delivery Unit QFP Representative. QFP administration. CS Release Management. Test Stage Management. Business Requirements
Outputs:	Incident with Target Release agreed.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.5 Defect Resolution

4.5.1 Process Flow

5.0 Defect Resolution
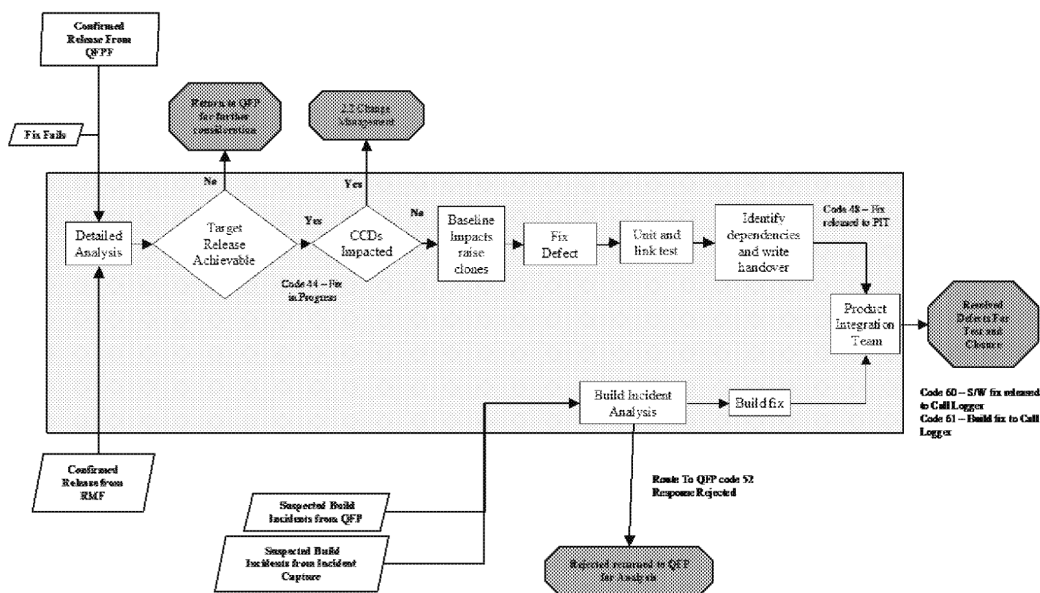
4.5.2 Process description

Process Owner:	Manager, Delivery Units.
Process Objectives:	Identify the steps and actions needed during defect resolution.

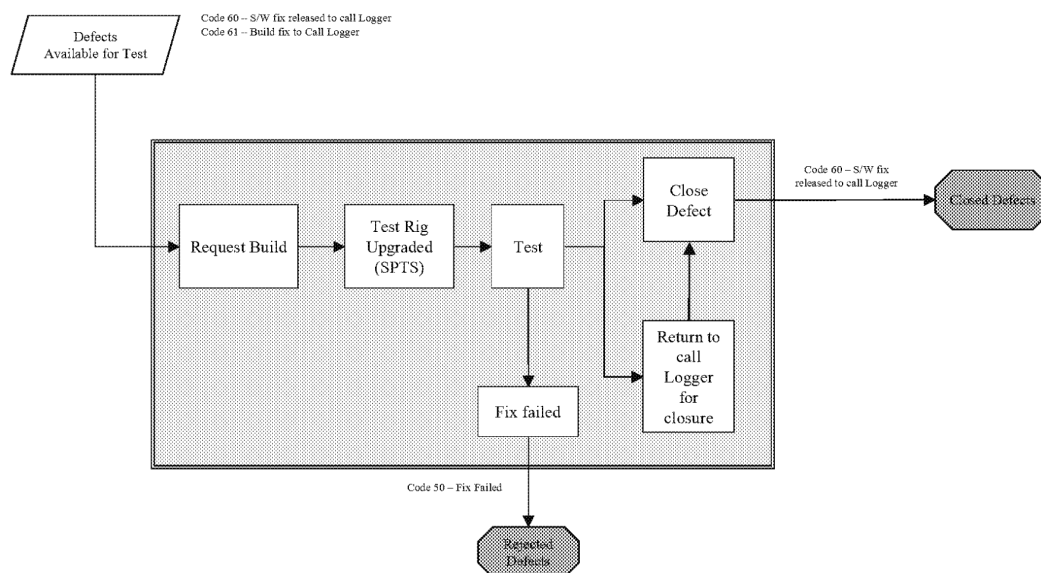| Process Rationale:	DE/PRO/003 ICL Pathway Development Directorate Processes CM/PRD/001 Software Configuration Management Version Control and CM/PRD/003 Work Package request are applicable to this Process.
	The relevant Delivery Unit undertakes detailed analysis work identifying the fix to be made.
	A check is made to establish that the work can be completed for the Target Release identified. If this is not the case or the detail of the fix has changed it is returned to QFP for further consideration.
	A further check is made to ensure no contract controlled documents are impacted e.g. PPDs. If there are impacts the Incident must be sent to the TDA as a change management action.
	If a number of software baselines are being progressed in parallel then a clone PinICL is required to track each change to each baseline. A common example would be a live fix where a clone of the Live fix would be required to the current baseline being developed. The procedure for creating clone PinICLs is identified in the PinICL Reference Data Guide CM/MAN/005.
	The fix is Unit and Link Tested then delivered by PIT ready for testing by the Call Logger.
	A handover note is produced identifying dependencies etc. This is documented in CM/PRD/001 Software Configuration Management Version Control.
	Build Incidents are analysed by TI who either accept and fix the defect or reject for further analysis by QFP as more likely a Delivery Unit Incident.
Inputs/Triggers:	Suspected build Incidents passed directly to TI for action.
	Suspected build Incidents from QFP.
	Fix fails for correction.
	Potential Product Defects with approved Target Release from either RMF or QFPF.
Sub Processes:	None.
Resources:	Delivery Units.
	Technical Integration.
Outputs:	Resolved defects ready for testing.
	Potential Product Defects returned to QFP for further consideration (either from TI or delivery units).

Standards:	PinICL Training Manual and PinICL Reference Data Guide.

4.6 Defect Test and Closure

4.6.1 Process Flow

6.0 Defect Test and Closure

4.6.2 Process description

Process Owner:	Manager, Delivery Units. B&TC Manager. CS Manager (is a separate CS process)

Process Objectives;	Verify that the actions taken to correct defects have been successful.
	Identify the steps and actions associated with defect test and closure.
Process Rationale:	Call originator is responsible for defect closure.
	All defects are passed to a test team to verify that the fault has been fixed.
	Arrange for their test rig to be updated with the new software.
	On successful test the defect is either closed as tested successfully or updated as tested successfully and routed to Call Logger for closure.
	Fix fails are rejected for rework.
Inputs/Triggers:	Corrected Defects available for test.
Sub Processes:	None.
Resources:	Potentially all Pathway Programme Staff, but mainly:
	Delivery Unit Staff responsible for testing.
	B&TC Staff responsible for testing.
	CS Staff responsible for testing.
Outputs:	Rejected Defects – failed test.
	Closed defects.
Standards:	PinICL Training Manual and PinICL Reference Data Guide.