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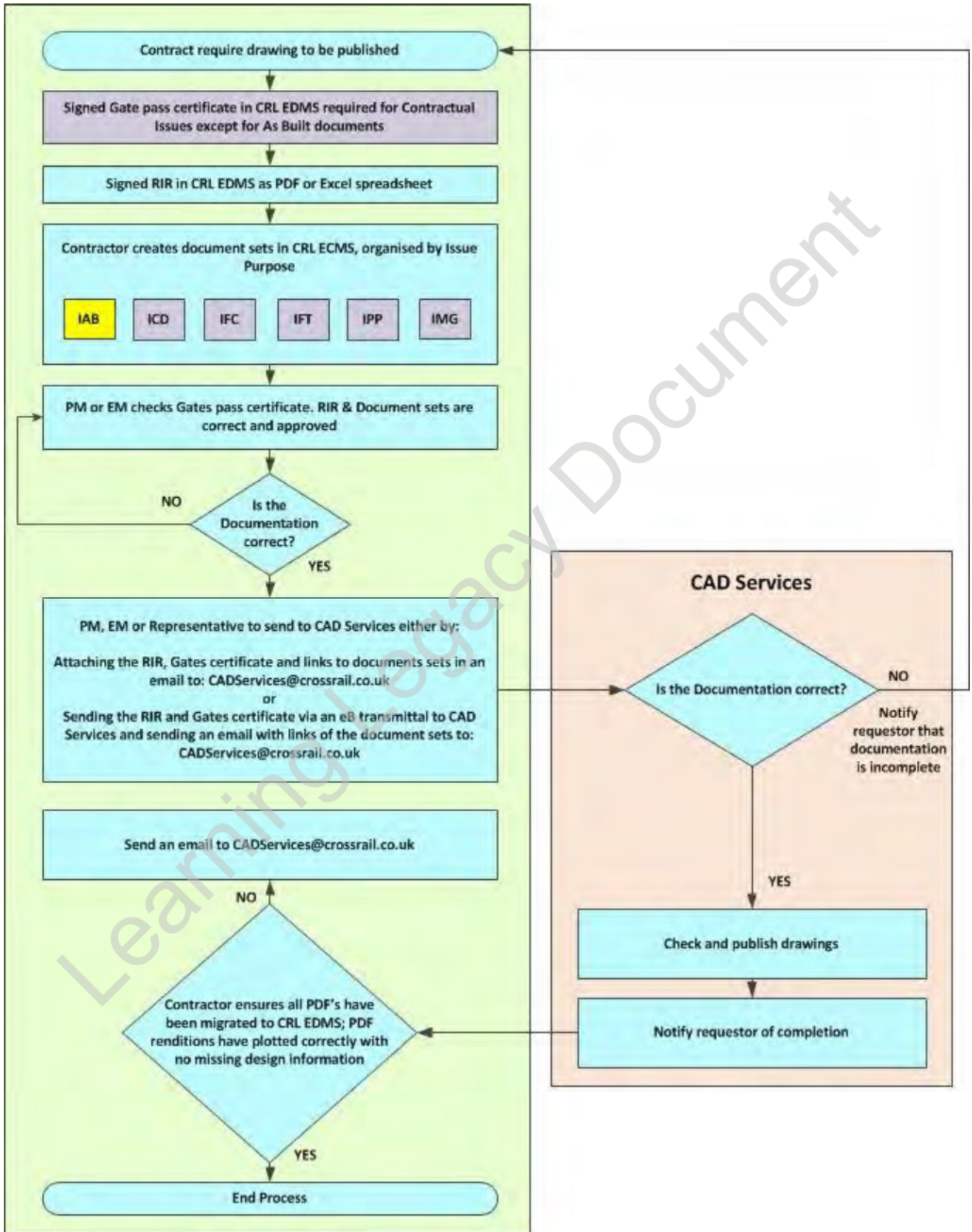
Page 11 – Glossary

- ◀ The process whereby drawings are advanced from a preliminary pre-contract design (P Revision) into a post contract revision (C Revision). The post contract revisions can then be used for Contractual Issues Purposes (including Issue for Construction).
- ◀ This Quick Reference Guide (QRG) explains the process followed when a contractor requires the publication of drawings for a Contractual Issue Purpose.
- ◀ Contractors must follow the correct preparatory steps to ensure their requests are processed. This includes having all the correct documentation approved and signed
- ◀ If the correct procedures are followed the drawings will be published in ProjectWise and the pdfs will be automatically produced and migrated to eB, from where they can be issued to site.

▶ Contents

▶ Scope

▶ Introduction



◀ Signed Gates Pass Certificate

Contract Project Engineer (PE) or Engineering Manager (EM) must ensure the Gates Pass Certificate (GPC) exists in accordance with the Engineering Design Assurance Gates Procedure – CRL1-XRL-O7-GPD-CR001-50015.

GPC Template – CRL1-XRL-C-ZTM-CR001-50001

◀ Signed Register & Issue Record (RIR)

Contractor must ensure a signed RIR by the Contract PE exists, which clearly lists all the drawings and associated design deliverables to be issued, indicating their current POx revisions and Issue Purpose – See notes provided in the template.

RIR Template – CRL1-XRL-Z-ZTM-CR001-50019

◀ Approve drawings to correct state (Mini Gate)

If the file is to be published as a series of Mini Gates (MG - Fit for Construction as denoted). The status of the drawings must be approved to the 'Shared' state. The drawings can then be revised by the Contractor to the next POx. state to allow further design development to continue.

The Contractor is responsible for ensuring that the elements of design being submitted for acceptance and publication through the mini gate are clearly denoted on the drawing through the use of appropriate clouds and/or other highlighting methods (symbolisation, hatching, shading, etc.). Where clouds are the most suitable method for emphasising the design being submitted it is recommended that inverted clouds are used so they can be differentiated from standard clouds which are typically used to denote changes between drawing revisions.

◀ Approve drawings to correct state (Main Gate)

In all other scenarios where the file is being published for any other Contractual Issue Purpose then the Contractor must arrange for the drawings to be checked and approved within the ECMS throughout the workflow so that they are at a state of 'Authorisation' – Drawings can only be published at this state. It would be advisable to make sure the 'Shared' POx revisions are in eB before moving the drawings to 'Authorisation'. See CAD QRG – ProjectWise Issued for Authorisation (CR-XRL-Z3-GUI-CR001-50167) for more information.

◀ Create a Document Set

Contractors must create document sets for their drawings and arranging them into each Issue Purpose.



▶ Contractor Responsibility (cont. 1)

Documents within a document set should be at the state of 'Authorisation' for CAD Services to successfully accomplish a publishing request. Instructions on how to create a document set can be found in ProjectWise here:

<pw:\\pwsintprd.crossrail.co.uk:PWPRD\Documents\CommonData\Documentation\UserGuides\CreateDocumentSet>

◀ **DO NOT submit documents containing *DDH* document codes for publication**

Documents with *DDH* are sketches, and are issued as P Revisions, they are not published. If sketches are required to be published, they must be issued as drawings

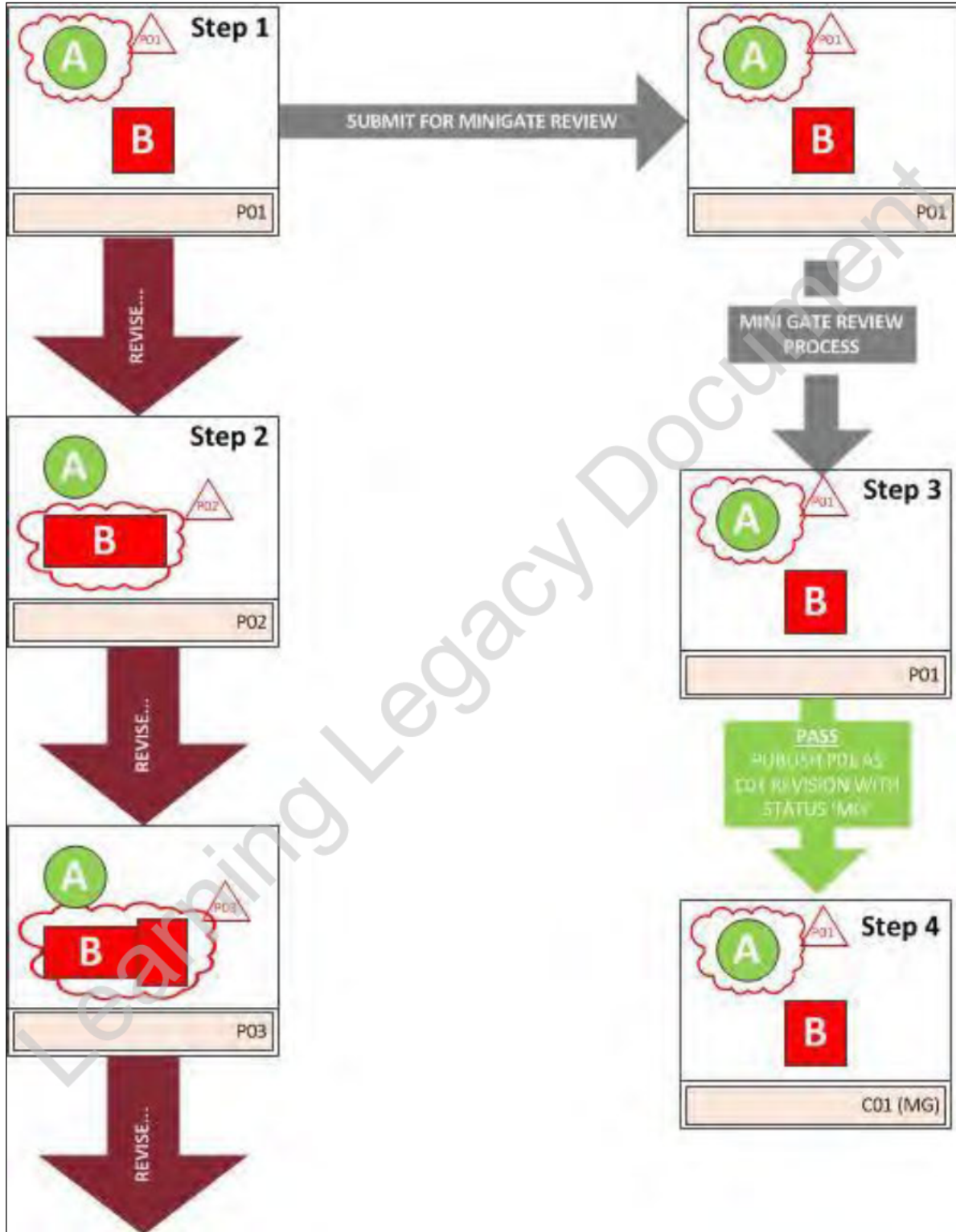
◀ **Check all documentation are approved and the document sets are correct**

A Contract PM, EM or Representative can submit a request for publishing to CAD Services. This can be done by either emailing CADservices@crossrail.co.uk with the approved Gate Pass Certificate and RIR attached as a pdf or excel spreadsheet including the ECMS document set links. OR by sending the approved Gate Pass Certificate & RIR via an eB transmittal to CAD Services along with sending an email to CADservices@crossrail.co.uk including the ECMS document set links.

◀ **Check eB for content of published drawings**

Contractors will be notified via an email from CADServices@crossrail.co.uk when their drawings are published. They must check eB to make sure the content of the published pdfs are correct, if there are any errors please send an email with details to: CADServices@crossrail.co.uk

Process 1: Example of an accepted design following the Mini Gate (IMG) approval process





▶ Contractor Responsibility

▶ Mini Gate Process (cont. 1)

◀ Step 1

Contractor prepares design drawings for the Gate Review by generating P0x (e.g. P01) drawings in ProjectWise at a 'Shared' state and ensuring they are automatically transferred into eB.

◀ Step 2

Contractor revises the P0x drawings in ProjectWise back to a 'Work In Progress' state (e.g. P02.1) to allow design development to continue.

◀ Step 3

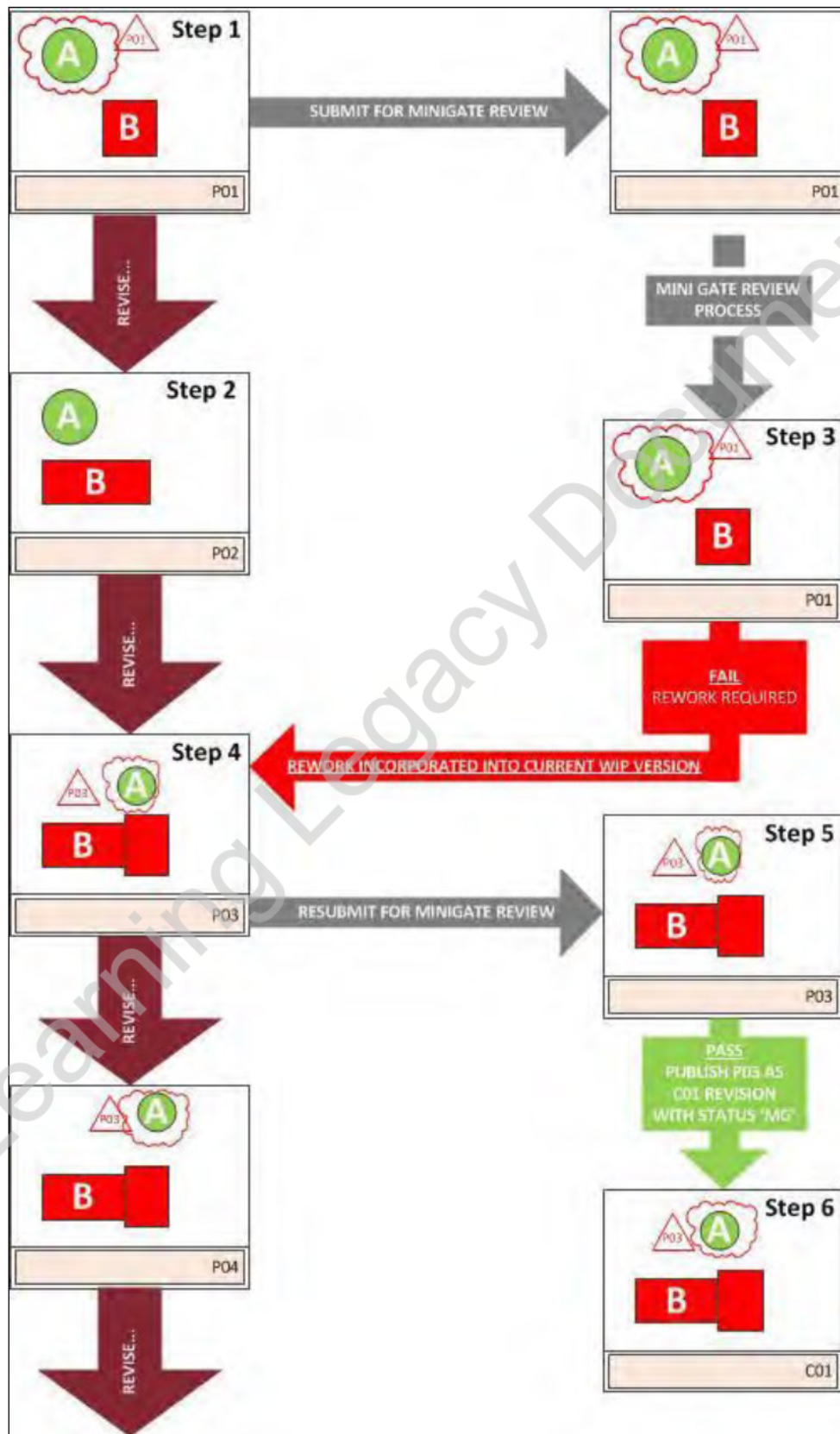
The Gate Review is completed on the 'Shared' state drawings P0x (e.g. P01) by Crossrail Gate Review Panel and the drawings are accepted.

◀ Step 4

P0x (e.g. P01) drawings (within ProjectWise) are advanced within the ECMS workflow by CAD Services to generate C0x (e.g. C01) revision MG Status (Issued for Construction as Denoted) drawings which are automatically transferred into eB.

Contractor builds to the C0x (MG Status) drawings.

Process 2: Example of a rejected design flow of the Mini Gate (IMG) process.





▶ Contractor Responsibility

▶ Mini Gate Process (cont. 3)

◀ Step 1

Contractor prepares design drawings for the Gate Review by generating P0x (e.g. P01) drawings in ProjectWise at a 'Shared' state and ensuring they are automatically transferred into eB.

◀ Step 2

Contractor revises the P0x drawings in ProjectWise back to a 'Work In Progress' state (e.g. P02.1) to allow design development to continue.

◀ Step 3

The Gate Review is completed on the 'Shared' state drawings P0x (e.g. P01) by Crossrail Gate Review Panel and the drawings are rejected.

◀ Step 4

Contractor updates and resubmits design drawings for the Gate Review by generating P0x (e.g. P03) drawings in ProjectWise at a 'Shared' state and ensuring they are automatically transferred into eB.

Contractor undertakes the design changes in the currently progressing P0x revision drawings. Move back to **Step 1**.

◀ Step 5

The Gate Review is completed on the 'Shared' state drawings P0x (e.g. P03) by Crossrail Gate Review Panel and the drawings are accepted

◀ Step 6

◀ P0x (e.g. P01) drawings (within ProjectWise) are advanced within the ECMS workflow by CAD Services to generate C0x (e.g. C01) revision MG Status (Issued for Construction as Denoted) drawings which are automatically transferred into eB.

Contractor builds to the C0x (MG Status) drawings Contractor builds to the C0x (MG Status) drawings.

At final gate submission (when all MG design packages on the drawings have been gated) the P0x drawing is published in ProjectWise as C0x\IFC Status in accordance with Main Gate process (see **Page 3**).

- ◀ Check the signed Register & Issue Record (RIR) has been submitted correctly
 - The RIR can be submitted through eB or sent as an attachment in PDF or Excel format
- ◀ Check document sets are organised into their respective Issue Purposes and are at the correct state of 'Authorisation'
- ◀ Check for the presence of a valid Gate certificate
- ◀ Cross-check the drawings within the document set with the drawings in the RIR
- ◀ Any queries, contact the requester or CAD Manager for the contract
- ◀ Change the design status as per the requested Issue Purpose
- ◀ Complete each Document Set on an individual basis, in order to publish by Issue Purpose.

Select all the drawings > Right Click > Modify > Right Tab – 'Document Attributes Environment' > Scroll down to 'Design Status' and select the correct code:

IFT = D2	(Issued for Tender)
ICD = D3	(Issued for Contractor Design)
IPP = D4	(Issued for Manufacture/ Procurement)
IMG =MG	(Issued for Construction as Denoted)
IFC = A	(Issued for Construction)
IAB = AB	(As Built)
IFI	(Issued for Information) DO NOT PUBLISH

Table 1: Issues Purposes (all except IFI are Contractual Issue Purposes)



▶ CAD Services Responsibility ▶ (cont. 1)

◀ Authorise the drawings – Change status to published

Select all of the drawings > Right Click > Change State > Approve > OK

◀ Notify the Requestor that the drawings have been published

An email is sent to the requester including the following text:

'These files have been processed based on the acceptance of the design as per issued RIR and Gates Certification'.

◀ Any errors during publishing send email with details to: CADServices@crossrail.co.uk

◀ Enter record in the process log

Learning Legacy Document



▶ Glossary

◀ Document Set

A ProjectWise container which is populated with drawings and models. Used to group drawings and models together for a purpose, for example to issue for authorisation.

◀ EDMS

Crossrail's Electronic Document Management System. For the purpose of this QRG eB is the repository of all issued drawing pdfs.

◀ Gates Pass Certificate (GPC)

A Gates Pass Certificate is signed off in accordance with the Engineering Design Assurance Gates Procedure CRL1-XRL-07-GPD-CR001-50015.

Issue Purpose

IAB – Issued of As Built

IFI* – Issued for Information

ICD – Issued for Contractor Design

IFT – Issued for Tender

IFA – Issued for Acceptance

IMG – Issued for Construction as Denoted

IFC – Issued for Construction

IPP – Issued for Planning Procurement

** Note: All except IFI are Contractual Issue Purposes.*

◀ ECMS

Crossrail's electronic CAD data and model management system. For the purpose of this QRG, this is the system used for authorising CAD drawings.

◀ QRG

Quick Reference Guide – Crossrail's method for communicating step by step work instructions.

◀ Register & Issue Record (RIR)

Contains all the drawings, specifications and other deliverable documents to be issued by a designer to Crossrail Limited for onward issue to the contractor to perform works (*See RIR Template document number on Page 3*).



► Glossary (cont.1)

◀ Standards & Procedures Documents

CRL CAD Standard (CRL1-XRL-O6-STD-CR001-00014, CR-STD-005)

Issue of Design Documentation for Construction Procedure (CRL1-XRL-O4-GPD-CR001-50007)

BS 1192:2007 (ICS 01.100.30; 35.240.10) – Collaborative production of architectural, engineering and construction information – Code of Practice.

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