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# **QUALITY**

# **Employer's Completion Process**

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| 2.0      | 07-08-2012        |         |              |              | Changes to the process, numbering and flow-chart included |

### **Revision Changes:**

| Revision | Status / Description of Changes   |
|----------|---|
| 3.0      | General process update; Supervisor Representative (PFE) role clarified Section 3.0 – New definitions added. Section 6.0 Contract Closeout Checklist Forms:  • Forms C2, C3, C4, C6, C20 text / questions amended; • Forms C3, C7, C30 – form title amended; • Form C9 – Contract Closeout Checklist – Technical Information (New form) • Form C10 – Contract Closeout Checklist – Third Party Agreements (New form) |
| 4.0      | General process update  Details added for ECP process for Sectional Completions  Section added for ECP outstanding items register  Additional definitions added   |

# Employer's Completion Process CRL1-XRL-O4-GPD-CR001-50018 Rev 4.0

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# 1 Purpose

This procedure describes the Employer's Completion Process (ECP) which will demonstrate that CRL has exercised due diligence prior to acceptance of the Crossrail Central Section Works Contracts. These are to be certified by the Delivery Team (DT) and Contractors as being complete and compliant with the requirements of the Programme, Works Information and relevant Third Party requirements.

The Employer's Completion Process also supports the *Supervisor* in the issue of the Defects List. This procedure should be read in conjunction with the *Completion of the Works (Project Manager's Duties)* procedure [Ref 1].

# 2 Scope

This procedure covers acceptance of the physical completion of all the Central Section Works and supporting documents and records. This procedure applies to each Contract Completion of the whole of the Works and in a leaner version to the Sectional Completions as detailed in item 4.1.4.

This procedure is also to be followed for railway systems (systemwide) Works. Contract Closeout Checklists listed in Section 6 shall be developed to address the scope of Works in line with the Programme.

The contractual certification of Completion by the Project Manager is covered within the *Contract Administration Manual (CAM) [Ref 2] and Completion of the Works (Project Manager's Duties) procedure [Ref. 1].* The commercial close out of the Contracts, including any settlements, final accounts, reconcilitation of CRL financial systems (SAP, PRISM etc.) is independent of the ECP and is covered within CAM.

# 3 Terms & Definitions

| Central Section<br>Works       | The railway between Westbourne Park in the west and Pudding Mill Lane and Victoria Dock portals in the east, plus part of the south eastern section from Victoria Dock Portal to the Plumstead Portal, including the Interfaces with Western and Eastern surface railways, LU and DLR |  |  |
|--------------------------------|---|--|--|
| CAM                            | Contract Administration Manual  |  |  |
| CAR                            | Corrective action request   |  |  |
| CM                             | Completion Manager  |  |  |
| CRL Function                   | CRL Function as listed in item 4.1.4  |  |  |
| Functional Lead<br>(FL)        | Head of CRL Function  |  |  |
| Completion                     | Is when the Contractor has:   |  |  |
|                                | <ul> <li>Done all the Work required by the Works Information by the<br/>Completion Date and</li> </ul>  |  |  |
|                                | <ul> <li>Corrected notified Defects which would have prevented the<br/>Employer from using the Works or others from doing their<br/>Work.</li> </ul>  |  |  |
| Contract                       | NEC 3 Works Contract between CRL and the relevant Contractor  |  |  |
| Contract Closeout<br>Checklist | Forms C0 – C30 as listed in section 6   |  |  |
| Contractor                     | Appointed to undertake and complete a Works Contract  |  |  |

| COWL                              | Consolidated Outstanding Works List. A list of items required to complete Works in an area, system or subsystem prior to Completion.   |  |  |
|-----------------------------------|--|--|--|
| Defects List                      | A list of Defects arising out of the COWL  |  |  |
| Delegate                          | A competent individual authorised by the Functional Lead to sign off Closeout Checklists.  |  |  |
| Delivery Team (DT)                | Delivery Team – the team delivering the Crossrail Central Section Works.   |  |  |
| ECP                               | Employer's Completion Process – Explained by this document   |  |  |
| FDC                               | Framework Design Consultant  |  |  |
| HoD                               | Head of Discipline at the Chief Engineering Group  |  |  |
| Infrastructures<br>Managers (IMs) | As defined in 'The Railway and Other Guided Transport Systems (Safety) Regulation 2006' an Infrastructure Manager is any person or organisation that:  • is responsible for developing and maintaining infrastructure (not including a station) or for managing and operating a station; and |  |  |
|                                   | <ul> <li>manages and uses that infrastructure or station, or allows it to<br/>be used for operating a vehicle.</li> </ul>  |  |  |
| NCR                               | Non-Conformance Report   |  |  |
| PM                                | Project Manager: The DT project role described in the Construction  Management Plan [Ref 3]  |  |  |
| SCCC                              | Sectional Contract Completion Certificate  |  |  |
| Sectional                         | Is when the Contractor has:  |  |  |
| Completion                        | <ul> <li>Done all the Work required by the Works Information by the<br/>Sectional Completion Date and</li> </ul>   |  |  |
|                                   | <ul> <li>Corrected notified Defects which would have prevented the<br/>Employer from using the Works or others from doing their<br/>Work.</li> </ul>   |  |  |
| Supervisor<br>(Italicised)        | The role as described in the NEC3 ECC Contract   |  |  |
| Supervisor Rep                    | Supervisor Representative (Project Field Engineer)   |  |  |
| (PFE)                             | The role as described in the NEC3 ECC contract.  |  |  |
|                                   | Project Field Engineer assigned roles and responsibilities under the Contract as described in the Construction Management Plan [Ref 3]   |  |  |
| TD                                | Technical Director   |  |  |
| Third Party                       | Utility Companies, Local Authorities, Tarmac, NR, DLR  |  |  |
| VAP                               | Verification Activity Plans  |  |  |
| WCCC                              | Whole Contract Construction Certificate  |  |  |
| Works Information                 | Volume 2A, 2B and 2C at relevant annexure to the Contract which includes any information referred to in these volumes  |  |  |

#### 4 Procedure

#### 4.1 General

- 4.1.1 The processes leading to ECP are as follows:
  - Certification of design by FDCs and / or Contractors working under a design and build Contract.
  - Notification / certification by the DT of imminent Contract Completion or Sectional Completion.Satisfactory close-out of CARs resulting from the programme of audits.
  - · Close-out of NCRs.
  - Close-out of DT deliverables.
  - Confirmation that all relevant consents necessary for the Works and related activities have been obtained and complied with.
  - Confirmation that all environmental requirements have been complied with.
  - Confirmation that all undertakings & assurances have been closed.
  - · Confirmation that all planning, heritage consents have been discharged and closed
  - The undertaking of completion inspections on the Contracts.
  - Close out of Consolidated Outstanding Works List (COWL) items.
  - Confirmation that the health and safety file has been prepared and is meeting CRLs requirements
  - Confirmation that all O&M manuals have been prepared and are meeting CRL requirements
  - Confirmation that all drawings, records, models, labels, tags are correctly allocated and accepted in accordance with CRL technical information standards
  - Verification of documentation that demonstrates delivery and acceptance of the Works by third parties, e.g. by a final certificate issued by a utility company or similar.
  - Confirmation that all self-certification requirements have been met and accepted.
  - Confirmation that all Verification Activity Plans (VAP) have been completed and closed out through progressive assurance.
  - Control of land transference responsibilities.
  - Third Party interface requirements have been complied with.
- 4.1.2 The above is demonstrated by a sign-off of a Contract Closeout Checklist for each Contract, completed by each CRL Function (Ref Section 4.1.4). The templates for the Contract Closeout Checklists are in Section 6 (Ref A M).
- 4.1.3 The Contract Closeout Checklists list a series of questions generated by each CRL Function for their respective sign-off. These questions demonstrate that all requirements within their respective functional responsibility have been satisfactory addressed. This ensures accountability for acceptance of the completed Works is consistently maintained.

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4.1.4 The following Contract Closeout Checklist are required to be reviewed and signed off by FLs prior to acceptance by the Completion Manager as evidence to demonstrate that the Closeout Checklist items have been satisfactorily addressed for Central Section Works Contracts:

| Requirements for Contract Closeout Checklist review and sign off by FLs |                                      |   |                                      |                                     |
|---|--------------------------------------|---|--------------------------------------|-------------------------------------|
| Contract<br>Closeout<br>Checklist                                       | Function                             | Functional Lead                         | Completion of the whole of the Works | Sectional Completion                |
| C1  | Health & Safety                      | Sector Health &<br>Safety Manager       | Required                             | Required                            |
| C2  | Technical Compliance                 | Chief Engineer supported by HoDs        | Required                             | At discretion of<br>Functional Lead |
| СЗ  | Planning, Heritage and<br>Highways   | Head of<br>Sustainability &<br>Consents | Required                             | At discretion of Functional Lead    |
| C4  | Environment                          | Head of<br>Sustainability &<br>Consents | Required                             | At discretion of Functional Lead    |
| C5  | Undertakings &<br>Assurances         | Head of<br>Sustainability &<br>Consents | Required                             | At discretion of Functional Lead    |
| C6  | Land and Property                    | Head of Estates                         | Required                             | At discretion of<br>Functional Lead |
| C7  | Rail Interfaces                      | Rail Interface<br>Manager               | Required                             | At discretion of<br>Functional Lead |
| C8  | Systemwide                           | Systemwide Director                     | Required                             | At discretion of<br>Functional Lead |
| C9  | Technical Information                | Head of Technical<br>Information        | Required                             | At discretion of<br>Functional Lead |
| C10   | Third Party Agreements               | Head of Agreements                      | Required                             | At discretion of<br>Functional Lead |
| C20   | Completion                           | Completion<br>Manager                   | Required                             | Required                            |
| C30   | Authorisation to Accept WCCC or SCCC | Completion<br>Manager                   | Required                             | Required                            |

## 4.2 Employer's Completion Process

- 4.2.1 At least **six months** before the date of each Contract Completion or Sectional Completion the Crossrail Completion Manager (CM) shall issue *ECP Notification Form C0 [See Section 6]* to each of the CRL Functional Leads (FLs), copied to the relevant PM and Supervisor Rep (PFE). The latest CRL programme provided by CRL planning department is to be used for the notification of dates for Contract Completion and Sectional Completion.
- 4.2.2 The FLs are then responsible for finalising their specific sign-off questions / issues noted on Contract Closeout Checklist Forms C1- C10 [See Section 6] within **14 days**.
- 4.2.3 The CM shall consolidate all sign-off questions relevant to the specific Contract approaching Completion / Sectional Completion onto an ECP tracker for that Contract. This list shall be verified as complete by the FLs as part of the Contract close out process.
- 4.2.4 The questions within the Contract Closeout Checklist forms will be signed-off by the Functional Leads who will be provided with supporting evidence by the PM / Supervisor Rep (PFE) as appropriate. These questions must be noted on the tracker and the respective evidence referenced (eB numbers and document titles).
- 4.2.5 Approximately **70 days** before Contract Completion, the CM shall organise a meeting with the PM, Supervisor Rep (PFE) and FLs to table the consolidated tracker and to provide an opportunity to clarify any issues / aspects of the sign off questions.
- 4.2.6 Following the meeting, the CM shall update the Contract specific ECP Tracker with any changes identified and then forward to the PM / Supervisor Rep (PFE) to maintain in sharepoint.
- 4.2.7 The PM shall progressively manage the close-out of the tracker questions over the period of closure of the Contract. The ECP tracker shall be updated by the Supervisor Rep (PFE) after each progress meeting and made available to the FLs and the CM in sharepoint. FLs shall progressively sign-off their respective questions on the C forms in line with the updated tracker subject to satisfactory provision of evidence / audit trails by the PM where required. This is to demonstrate the Closeout Checklist items have been addressed.
- 4.2.8 At least **14 days** prior to Contract Completion the CM, FLs, PM / Supervisor Rep (PFE) shall attend the final completion readiness review meeting in accordance with the *Completion of the Works (Project Manager's Duties) procedure (Ref 1),* at which the latest revision of the tracker shall be tabled. Attendance by the FLs is not required if their relevant actions/issues have all been closed-out. All outstanding actions are to be highlighted at this meeting and the CM shall notify the Sector Delivery Director, Technical Director, Chief Engineer and the Head of Quality of the issues.
- 4.2.9 The PM / Supervisor Rep (PFE) shall closely track, review progressively all outstanding issues and the FLs sign-off as they are resolved, particularly for those issues requiring PM verification to be supported by evidence.
- 4.2.10 Approximately **two days** prior to Contract Completion the PM shall request authorisation from the CM to sign the *Whole Contract Construction Certificate (WCCC) [Ref N] / Sectional Contract Construction Certificate* [Ref O]
- 4.2.11 Subject to the tracker questions being closed out by the PM / Supervisor Rep (PFE) and to the satisfaction of the FLs and the CM as appropriate, the CM shall sign Form C20 Contract Closeout Checklist Completion [See Section 6] followed by a Form C30 Authorisation to Accept Whole Contract Construction Certificate [See Section 6] and issue the Form C30 to the PM and Supervisor Rep (PFE) copying the FLs.
- 4.2.12 The signed copies of All C-Forms for each Contract shall be scanned and uploaded to eB as **one document** by the CM. The updated tracker shall be added to the C-Forms in eB.

## 4.3 ECP Outstanding Items Register

The purpose of the register is to record items, where during the ECP close-out process the Contractor has completed all the Works and provided all the deliverables required by the Contract but the ECP process remains open due to matters requiring CRL internal close-out.

Registering open ECP matters, which fall outside of Contractors control and require CRL internal closeout, may allow for conditional sign off of the ECP process by releasing the C30 Form conditionally, authorising acceptance of the WCCC/SCCC. At the same time the ECP process will remain open until such time that the Contract's Project Manager has ensured that all open items within the ECP process have been closed out.

Prior to adding items to the Employers Completion Process (ECP) Outstanding Items Register [ref. 4] the CRL Project Manager is to consult the relevant Director and obtain his/her acceptance that the outstanding items are purely for CRL internal close-out and can be added to the register allowing for conditional release of the WCCC/SCCC. It will remain the PMs responsibility to manage the closure of the outstanding ECP items.

The Employers Completion Process (ECP) Outstanding Items Register [Ref. 4] will be created and maintained by the CM and a live copy will be kept on eB. The register will clearly detail actions required, responsible PM, delivery Director and required close-out date. The CM will hold periodic meetings with the relevant PMs and FLs (where required) to monitor close out of the outstanding items. Once all the items relevant to the specific Contract have been addressed the C30 form will be up-reved and reissued.

# 5 Reference Documents

| Ref: | Document Title  | Document Number:            |
|------|---|-----------------------------|
| 1.   | Completion of the Works (Project Manager's Duties)            | CRL1-XRL-O4-GPD-CR001-50017 |
| 2.   | Contract Administration Manual                                | CRL1-XRL-W-GML-CR001-50001  |
| 3.   | Construction Management Plan                                  | CRL1-XRL-N2-STP-CR001-50002 |
| 4.   | Employers Completion Process (ECP) Outstanding Items Register | CRL1-XRL-O4-LRG-CR001-50004 |

# 6 Standard Forms / Templates

| Ref: | Document Title   | Document Number:                   |
|------|--|------------------------------------|
| A.   | Form C0 – ECP Notification   | CRL1-XRL-O4-ZTM-CR001-50015        |
| B.   | Form C1 – Contract Closeout Checklist – Health & Safety                    | CRL1-XRL-O4-ZTM-CR001-50016        |
| C.   | Form C2 – Contract Closeout Checklist – Technical Compliance               | CRL1-XRL-O4-ZTM-CR001-50017        |
| D.   | Form C3 – Contract Closeout Checklist – Planning, Heritage and Highways    | CRL1-XRL-O4-ZTM-CR001-50018        |
| E.   | Form C4 – Contract Closeout Checklist – Environment                        | CRL1-XRL-O4-ZTM-CR001-50019        |
| F.   | Form C5 – Contract Closeout Checklist – Undertakings & Assurances          | <u>CRL1-XRL-O4-ZTM-CR001-50020</u> |
| G.   | Form C6 – Contract Closeout Checklist – Land and Property                  | CRL1-XRL-O4-ZTM-CR001-50021        |
| H.   | Form C7 – Contract Closeout Checklist – Rail Interfaces                    | CRL1-XRL-O4-ZTM-CR001-50022        |
| I.   | Form C8 – Contract Closeout Checklist – Systemwide                         | CRL1-XRL-O4-ZTM-CR001-50023        |
| J.   | Form C9 – Contract Closeout Checklist – Technical Information              | CRL1-XRL-O4-ZTM-CR001-50036        |
| K.   | Form C10 – Contract Closeout Checklist – Third Party Agreements            | CRL1-XRL-O4-ZTM-CR001-50037        |
| L.   | Form C20 – Contract Closeout Checklist – Completion                        | CRL1-XRL-O4-ZTM-CR001-50024        |
| M.   | Form C30 – Authorisation to Accept Whole Contract Construction Certificate | CRL1-XRL-O4-ZFM-CR001-50005        |
| N.   | Whole Contract Construction Certificate (WCCC)                             | CRL1-XRL-O4-ZTM-CR001-50030        |
| О.   | Sectional Contract Construction Certificate (SCCC)                         | CRL1-XRL-O4-ZFM-CR001-50009        |