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1.0 Employer’s Information Requirements

This Specimen Employer’s Information Requirements (EIR) document is designed to be included in the tender documents for the procurement of both a Design Team and the Constructor. The content can be incorporated into other tender documents. The EIR will require editing to confirm project-specific requirements for each of the sections. Standard responses have been included and in many cases these can be adopted without amendment. However, all EIR content will require review and confirmation before issue to ensure that there are no project specific issues which need to be taken into account.

Guidance written into the EIRs should be deleted prior to formal issue,

EIRs are an important element of Project BIM Implementation as they are used to set out clearly to the bidder what models are required and what the purposes of the models will be. These requirements will be written into the BIM Protocol and implemented through the BIM Execution Plan.

In accordance with PAS 1192-2, the Design Team and Constructor should each include an outline BIM Execution Plan (BEP) in their proposal. In addition to information requested as part of the tender process, a comprehensive initial BEP will include the following content:

- the Project Implementation Plan – see 6.5.3;
- project goals for collaboration and information modelling;
- major project milestones consistent with the project programme; and
- project Information Model deliverable strategy

A compliant BEP will demonstrate how the requirements outlined in the EIRs will be met.

The EIR is a key document with regards to communicating information requirements as well as establishing information management requirements. The EIR will act as a good basis from which to review the contents of the tenderer’s BIM Execution Planning, confirming its completeness.

The core content and guidance is split into the following sections:

<table>
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<th>Management</th>
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<td>o Health and Safety and Construction Design</td>
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<td>Management</td>
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<td></td>
<td>o Systems Performance</td>
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<td></td>
<td>o Compliance Plan</td>
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<td></td>
<td>o Delivery Strategy for Asset Information</td>
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</tbody>
</table>
Adaptations to the EIRs will be required to align with the requirements of the employer. Areas where adjustments are likely to be required include:

- Type of asset. This document was prepared on the assumption that the asset is a building – this will not be the case for all employers;
- Project stages. Data drops and associated information requirements are to be mapped against the project stages of a particular employer;
- Information requirements. Data drops are to be aligned against the needs of the project – e.g. new-build vs. on-going asset management;
- Procurement strategy. Data drops are to be aligned with the procurement strategy adopted by the employer (e.g. Cost-led, Integrated Insurance, two-stage open book);
- IT requirements. Collaboration tools and other employer-specific requirements are to be specified. For example, any collaboration site provided by the employer;
- Detailed alignment of documents. Terminology for information, stages, documents and roles described in the EIRs should match that used in specific appointment documents;
- Detailed technical information requirements. Space object properties are likely to vary by employer and asset type.

Section 2 outlines the additions to other tender documents for a Constructor tender issue.
## 1.1 Technical

This section establishes technical information requirements, including the software, data drop contents and level of detail.

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<tr>
<th>Reference</th>
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<th>Description</th>
<th>Response</th>
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</thead>
</table>
| 1.1.1     | Software Platforms | Define the platform for the Building Information Model as well as other software platforms to be used | This EIR should include: Platforms and versions used by the employer across the programme of projects include the following:  
- Collaboration – XXX  
- Facilities maintenance – XXX  
The ability of the bidder to work with these platforms should be made clear in the response. Details of information exchange requirements are set out in 1.1.2, data exchange format. Designers and Constructors should configure their attribute data in their models to align with the data exchange format. The BEP should set out how this will be achieved.  

**Guidance:** In accordance with an open approach to software solutions, the EIRs should not dictate a software solution to the supply chain. However, depending on the stage of the project, the Employer will be able to state the versions and platforms used to prepare data drops that the bidder will receive. The employer will also be able to define the versions and platforms used for employer collaboration and facilities management. When appointing a design team or integrated project team, only collaboration, information exchange and FM versions and platforms should be described in the EIRs: Design development by the Consultant team may include the following disciplines (as required). Where design models are provided by the Employer as a data drop, the platforms/versions used to produce the design deliverables should be stated within the BEP. This information is incorporated into the contract using the BIM Protocol:  
- Architecture  
- Structures  
- MEP  
- Model Coordination  
- Collaboration  
The Constructor design development may include the following (as required). Platforms and versions should be stated in the BEP. Again, the Client should not be prescriptive regarding the software used for design or analysis:  
- Building Physics  
- Environmental  
- Acoustic  
- Daylight analysis  
- Fire  
- Planning (4D) and Cost (5D) |
<table>
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<th>Reference</th>
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</table>
| 1.1.2     | Data Exchange Format  | The purpose of this section is to define the formats used to deliver data at data drops | This EIR should include: For each of the data drops, information will be required in the following formats:  
- Native – 3D model files product specific for all design and analysis models  
- COBie – COBie-UK-2012 version 2.4  
- PDF files – no older than version 7.0  
Guidance: Government Employer Requirements mandate information in a COBie format (a relative of IFC). The Construction-Operations Building Information Exchange (COBie) format facilitates the delivery of asset information during planning, design, construction, and commissioning for delivery to facility owners and operators.  
The version reference for COBie and PDF files can be stated  
Under the BIM Protocol, a project member undertakes to generate data provided in all three formats from the same data set.  
There is no specific contractual provision to deal with discrepancies, but it can be anticipated that if discrepancies were discovered, then a submission will be returned. The return of the submission is unlikely to be accepted as the cause of a variation/compensation event. |
| 1.1.3     | Co-ordinates          | The purpose of this section is to encourage the adoption a common coordinate system for all BIM data with consistent adoption for all models. Defines requirements for the common coordinate system for all BIM data. Details modifications to imported DWG/DGN co-ordinates. | This EIR should include:  
The minimum requirement is spatial coordination stated as follows:  
e.g:  
- Intersection of grids XX and YY - xxxxxx.xxxE and xxxxxx.xxxN  
- Intersection of grids AA and BB - xxxxxx.xxxE and xxxxxx.xxxN  
- Ground floor FFL = xxx.xxx  
Other coordination standards defined in the EIRs/BIM Execution Plan should include:  
- Origin rotation  
- Offsets  
- Datum information  
- Units to be used |
### Reference Item Description Response

1.1.4 Level of Detail The purpose of this section is to define requirements for information submissions/data drops at project stages. This information is used to populate the Model Production and Delivery Table included in the CIC BIM Protocol (MPDT).

The MPDT defines the scope of the models for the purposes of the contract. It is important that the MPDT is comprehensive and is regularly updated. The MPDT also defines for the purposes of the contract the levels of detail used for the various phases of the project.

**EIR provided to define the Level of Detail should include the following detail**

**Details of information requirements**

- A schedule of work stages (APM is the preferred option but RIBA/ICE/bespoke can be used)
- Expected Level of Detail for models at each work stage
- Alignment of data drops to the work stages
- Definitions of the levels of detail. E.g. Definitions published in PAS 1192-2

*Extract from Appendix 1, CIC BIM Protocol – Definition of Level of Detail and Project Stages*

<table>
<thead>
<tr>
<th>Levels of Detail and the Model Production and Delivery Table</th>
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<tbody>
<tr>
<td>The Levels of Detail are as follows:</td>
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<td>The Stages are as follows:</td>
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<tr>
<td>LOD 1 - STAGE 1</td>
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<td>LOD 2 - STAGE 2</td>
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<td>LOD 3 - STAGE 3</td>
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<td>LOD 4 - STAGE 4</td>
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<tr>
<td>LOD 5 - STAGE 5</td>
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<tr>
<td>LOD 6 - STAGE 6</td>
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<tr>
<td>LOD 7 - STAGE 7</td>
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</tbody>
</table>

*This is a framework for a Model Production and Delivery Table. The parties may choose any other appropriate format and attach it to this Appendix.*

*An editable version of the BIM Protocol Appendices are provided on the BIM Task Group Website: www.bimtaskgroup.org*

Details of individual models and other deliverables aligned to work stages and data drops are captured at section 1.3.1.

**Guidance:** A worked example of a simple MPDT is set out overleaf. This has been taken from Appendix 1 of the CIC BIM Protocol. All models that are expected to be used to produce Project Outputs should be detailed in this table. If a model is not described in the table, it will not be covered by the provisions of the BIM Protocol. Details of the models themselves should be recorded at section 1.3.1 of the EIR.

**Under the BIM Protocol, the responsibility for the maintenance of the MPDT sits with the employer. It is envisaged that the table will be managed by a party appointed by the employer.**

Accurate recording of the Level of Detail is important. Originators will typically be required to complete models strictly to the level of detail required at a particular stage. Similarly information users will typically be required to only rely on information completed to the contractually defined level of detail.

*In advance of the publication of definitive UK definitions of Levels of Detail for models, assemblies and components, employers can use existing generic definitions such as that included within PAS 1192-2 as a reference point.*
## Specimen Production and Delivery Table for CIC BIM Protocol

<table>
<thead>
<tr>
<th>Model Originator</th>
<th>Level of Detail</th>
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<tbody>
<tr>
<td>Model Originator</td>
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<td>Model Originator</td>
<td>Level of Detail</td>
</tr>
<tr>
<td>Model Originator</td>
<td>Level of Detail</td>
</tr>
</tbody>
</table>

### Overall form and content
- **Space planning**
  - Drop 1: Architect 1, Contractor 2
  - Drop 2a: Architect 1, Contractor 2
  - Drop 2b: Architect 1, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **Site and context**
  - Drop 1: Contractor 2, Contractor 2
  - Drop 2a: Contractor 2, Contractor 2
  - Drop 2b: Contractor 2, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **Surveys**
  - Drop 1: Contractor 2
  - Drop 2a: Contractor 2
  - Drop 2b: Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **External form and appearance**
  - Drop 1: Architect 2, Contractor 2
  - Drop 2a: Contractor 2, Contractor 2
  - Drop 2b: Contractor 2, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **Internal layouts**
  - Drop 1: Architect 2
  - Drop 2a: Architect 2
  - Drop 2b: Architect 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

### Design strategies
- **Fire**
  - Drop 1: Architect 2, Contractor 2
  - Drop 2a: Contractor 2, Contractor 2
  - Drop 2b: Contractor 2, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **Physical security**
  - Drop 1: Architect 2, Contractor 2
  - Drop 2a: Contractor 2, Contractor 2
  - Drop 2b: Contractor 2, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **Disabled access**
  - Drop 1: Architect 2, Contractor 2
  - Drop 2a: Contractor 2, Contractor 2
  - Drop 2b: Contractor 2, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **Maintenance access**
  - Drop 1: Architect 2, Contractor 2
  - Drop 2a: Contractor 2, Contractor 2
  - Drop 2b: Contractor 2, Contractor 2
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

### Performance
- **Building**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Structural**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **MEP systems**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Regulation compliance analysis**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Thermal Simulation**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Sustainability Analysis**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Acoustic analysis**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **4D Programming Analysis**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **5D Cost Analysis**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Services Commissioning**
  - Drop 1: Architect 1
  - Drop 2a: Architect 1
  - Drop 2b: Architect 1
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

### Elements, materials components
- **Building specifications**
  - Drop 1: Architect 1, MEP Eng
  - Drop 2a: Architect 1, MEP Eng
  - Drop 2b: Architect 1, MEP Eng
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

- **MEP systems specifications**
  - Drop 1: Architect 1, MEP Eng
  - Drop 2a: Architect 1, MEP Eng
  - Drop 2b: Architect 1, MEP Eng
  - Drop 3: Contractor 3, Contractor 6
  - Drop 4: Contractor 3, Contractor 6

### Construction proposals
- **Phasing**
  - Drop 1: Contractor 3
  - Drop 2a: Contractor 3
  - Drop 2b: Contractor 3
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Site access**
  - Drop 1: Contractor 3
  - Drop 2a: Contractor 3
  - Drop 2b: Contractor 3
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Site set-up**
  - Drop 1: Contractor 3
  - Drop 2a: Contractor 3
  - Drop 2b: Contractor 3
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

### Health and safety
- **Design**
  - Drop 1: Contractor 3
  - Drop 2a: Contractor 3
  - Drop 2b: Contractor 3
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Construction**
  - Drop 1: Contractor 3
  - Drop 2a: Contractor 3
  - Drop 2b: Contractor 3
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

- **Operation**
  - Drop 1: Contractor 3
  - Drop 2a: Contractor 3
  - Drop 2b: Contractor 3
  - Drop 3: Contractor 3
  - Drop 4: Contractor 3

## LOD definitions (from PAS 1192)
- **1 Brief**
- **2 Concept**
- **3 Developed Design**
- **4 Production**
- **5 Installation**
- **6 As constructed**
- **7 In use**

## Stage definitions (from APM)
- **0 Strategy**
- **1 Brief**
- **2 Concept**
- **3 Definition**
- **4 Design** (production information)
- **5 Build & Commission**
- **6 Handover & Closeout**
- **7 Operation and end of life**

## Model Originators identified by name
### 1.1.5 Training

The purpose of this section is to provide bidders with details of training that will be provided in connection with project systems, or training requirements which the bidder will be required to deliver as part of their appointment/contract.

**This EIR should include:**
Details of training for specified client specific applications that will be used on the project. This should refer to item 1.1.1.
Details of any additional training requirements for the client team

**Guidance:** The EIRs should communicate clearly that the responsibility for training associated with other modelling and analysis tools rests with the consultant/constructor.

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</table>
| 1.1.5     | Training | The purpose of this section is to provide bidders with details of training that will be provided in connection with project systems, or training requirements which the bidder will be required to deliver as part of their appointment/contract. | **This EIR should include:**
Details of training for specified client specific applications that will be used on the project. This should refer to item 1.1.1.
Details of any additional training requirements for the client team

**Guidance:** The EIRs should communicate clearly that the responsibility for training associated with other modelling and analysis tools rests with the consultant/constructor. |

### 1.2 Management

This section deals with setting the standards to be used for the definition and delivery of the project, along with how the co-ordination and review processes will be managed.

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<thead>
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<th>Reference</th>
<th>Item</th>
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</table>
| 1.2.1     | Standards | The purpose of this section is to define the BIM Standards that are incorporated into the Information Requirements, Appendix 2 of the CIC BIM Protocol. | **This EIR should include:**
Definitions of the core documents and standards that are to be mandated on the project: e.g.:
- PAS1192:2
- Supported by BS1192:2007
- COBie-UK-2012

**Guidance:** Use of these standards can be incorporated into the contract via the CIC BIM protocol

Adoption of other standards related to Building Information Modelling can be encouraged if specifically relevant (this list is not exhaustive):
- BS7000 series - Design Management Systems
- BS8534:2011 - Construction Procurement policies
- BS10012 - Data Protection
- PAS 55-1:2008 - Asset Management |

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<td>Reference</td>
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</table>
| 1.2.2     | Roles and Responsibilities | The purpose of this section is to bring to the attention of the project team the allocation of roles associated with the management of the model and project information. The roles themselves are addressed in specific appointments and ERs. PAS 1192-2 provides a useful cross-tabulated summary of the roles as they apply across Project Team Members | **This section should include:**
References to existing documentation (XXXX) which define the responsibility and scope of appointments associated with roles including:
- Client’s Technical Adviser (TA)
- Project Delivery Manager (PDM)
- Information Manager
- Lead Designer
- Task Team Manager

Details of activities under taken by the employer:
The following roles in connection with BIM will be taken on directly by the employer:
- To be detailed as required

Guidance: Roles associated with the management of information on BIM-enabled projects are described in outline in PAS 1192-2.

An outline scope of service for the role of Information Management has been published by CIC.

All of the roles described in PAS 1192-2 are expected to be undertaken within the scope of existing appointments.

Any drafting of roles and responsibilities in the EIRs should be aligned with drafting published in appointment documentation and employer’s requirements/specifications.

Detailed of how any BIM-specific roles will be delivered and coordinated should be included in the BIM Execution Plan. |
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>1.2.3</td>
<td>Planning the Work and Data Segregation</td>
<td>The purpose of this section is to set out requirements for the bidder’s proposals for the management of the modelling process</td>
<td><strong>This EIR should include:</strong> A statement that information should be managed in accordance with the processes described in PAS1192-2 and BS 1192 (2007) Where the employer has specific requirements for work management, the requirement and request for proposals should be identified in the EIRs Examples of requirements include:  - Model Management  - Volumes, Zones and Areas  - Naming Conventions  - Publishing processes Fully documented procedures are required in the BIM Execution plan</td>
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<td>1.2.4</td>
<td>Security</td>
<td>The purpose of this section is to communicate client specific security measures required in order to secure the data</td>
<td><strong>This EIR should include:</strong> Details of the security standards that apply to information used on the project. For example: Any file when uploaded to the collaboration site or other electronic document management system, is to be secure to the standard required by the employer. For this project, security is defined in accordance with business impact levels defined in the HMG Security Policy Framework as follows:  - IL1 – not protectively marked  - IL2 - protect  - IL3 - restricted  - IL4 - confidential Guidance: The bid submission should demonstrate the supplier’s compliance with mandated security systems. The completed BIM Execution Plan will set out compliance processes and the means by which compliance is monitored and managed.</td>
</tr>
<tr>
<td>Reference</td>
<td>Item</td>
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<tr>
<td>1.2.5</td>
<td>Coordination and Clash Detection</td>
<td>The purpose of this section is to define the required co-ordination process, together with requirements for quality control?</td>
<td><strong>This EIR should include:</strong>&lt;br&gt;Requests for details of the following project management processes:&lt;br&gt;  - Details of the clash detection process including:&lt;br&gt;    - Software&lt;br&gt;    - Process overview&lt;br&gt;    - Responsibilities&lt;br&gt;    - Outputs&lt;br&gt;  - Technical query workflow&lt;br&gt;  - Tolerance strategy&lt;br&gt;  - Clash resolution process&lt;br&gt; <strong>Guidance:</strong> Agreed processes will be defined in the completed BIM Execution Plan</td>
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<td>1.2.6</td>
<td>Collaboration Process</td>
<td>The purpose of this section is to define how, where and when project information will be shared</td>
<td><strong>This EIR should include:</strong>&lt;br&gt;Details of the collaboration process sufficient to demonstrate competence and capability at tender. It is expected that full details of the process will be included within the completed BIM Execution plan. Details of the process received at tender should include details of:&lt;br&gt;  - Form of sharing&lt;br&gt;  -Extent of model i.e. reduced LoD&lt;br&gt;  -Frequency of collaboration and information exchange&lt;br&gt;  -Details of model review workshops and other collaborative working practices&lt;br&gt; <strong>Guidance:</strong> Agreed processes will be defined in the completed BIM Execution Plan</td>
</tr>
<tr>
<td>Reference</td>
<td>Item</td>
<td>Description</td>
<td>Response</td>
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| 1.2.7     | Health and Safety/ Construction Design Management | The purpose of this section is to enable the employer to define how BIM-based working will support H&S/CDM monitoring aligned with the work stages. Data and records capture processes also need to be documented. | **This EIR should include:**

Details of how BIM enabled processes will be used to manage the employer’s and supplier’s H&S/CDM obligations, sufficient to demonstrate competence and capability at tender.

- Schedule of work stages (APM/RIBA/ICE/bespoke WBS)
- Overview of key H&S deliverables against each work stage
- Confirmation on how deliverables should be stored
- Requirements for disaster planning
- Approach to design authoring

**Guidance:** for example, against data drops the following could be specified:

**Drop 2a**

- Pre-construction information (PCI) document (collated and issued by CDMC using client team information, sent out with tender documents)
- Outline risk assessments from design team members (included in PCI)

**Drop 2b**

- The contractor is to provide an outline but project specific construction phase health and safety plan (maximum five pages), including but not limited to:
  - Project overview / description of works;
  - Project’s site specific risks for contractor’s design;
  - Contractor design team details;
  - Safe systems of work and person responsible for their coordination;
  - Site compound location and arrangements (e.g. stacking of site huts);
  - Traffic management plan identifying access arrangements (refer to other section if included elsewhere); and
  - Construction plant or equipment to be used in project.

**Drop 3**

- Contractor is to provide project construction phase health and safety plan on their appointment at least two weeks before agreed start on site date.
- Contractor is to supply relevant information to update F10

**Drop 4**

- Contractor is to
  - Collate information for operation and maintenance manuals throughout the construction period
  - Provide completed operation and maintenance manuals in the timescale dictated by handover procedures (starting six weeks before completion)
  - Provide information in accordance with prescribed format
  - Provide the CDM coordinator with relevant information.

**Drop 5 (post occupation)**

- Contractor is to
  - Ensure that all relevant documents including commissioning certificates and record drawings have been provided and indexed within the building manual.
  - Upload the Building Manuals onto XXX and provide 1 electronic and 1 hard copy to the Establishment.
<table>
<thead>
<tr>
<th>Reference</th>
<th>Item</th>
<th>Description</th>
<th>Response</th>
</tr>
</thead>
</table>
| 1.2.8     | Systems Performance | The purpose of this section is to communicate to bidders any constraints in the employer’s systems or specific IT requirements which may need additional resources or non-standard solutions. | **The EIR should include:** The following employer-side IT system restrictions and requirements need to be taken into account when developing the BIM Execution Plan:  
- Model size  
- Software uses  
- Access to free viewers  
- Security issues  
*Guidance:* The above should be populated with appropriate requirements and constraints, indicating where any specific detail is required in a contractor’s interim BIM Execution plan as part of a bid submission. |
| 1.2.9     | Compliance Plan | The purpose of this section is to enable the supplier to communicate how the integrity of the model and other data sources will be maintained | **The EIR should include:** Details of client-specified model and data compliance requirements, including references to standards and to compliance software that is used by the employer.  
It is expected that the supplier’s proposals for model and data compliance will be detailed within the BIM Execution plan, which should refer to:  
- Quality assurance/control procedure  
- Associated software  
- Level of assurance  
- Period of aftercare (the number of years that the model should be managed for)  
*Guidance:* The above should be populated with appropriate requirements, indicating where any specific detail is required in a contractor’s interim BIM Execution plan as part of a bid submission. If aftercare is required, the period for which it is required should be stated. |
| 1.2.10    | Delivery Strategy for Asset Information | This section defines the information exchange standard for asset information and enables the employer to obtain proposals with regards to asset information delivery into the employer’s FM environment? | **The EIR should include:** Confirmation of the information exchange format and reference to requirements for the Asset Information Model (AIM)  
The asset information should be delivered in the COBie 2012 format as prescribed in the data drop detail, and in accordance with requirements described in the Asset Information Model  
Text describing AIM delivery strategy should be populated with appropriate requirements and constraints, indicating where any specific detail is required in a contractor’s interim BIM Execution plan as part of a bid submission  
In addition, proposals should be included in the interim BIM Execution plan setting out proposals for how best to deliver information into the following defined facilities maintenance environment:  
- XXX  
*Guidance:* Define the details of systems/databases/information formats in use so that the contractor can demonstrate compliance with information management requirements |
1.3 Commercial

This section looks at the information requirements, defines purposes for data and the content of key deliverables.

<table>
<thead>
<tr>
<th>Ref</th>
<th>Item</th>
<th>Description</th>
<th>Response</th>
</tr>
</thead>
</table>
| 1.3.1 | Data Drops and project deliverables                               | The purpose of this section is to communicate the content of data drops and how data drops are aligned to work stages. Section 1.3.1 will also explain how data drops relate to the selected procurement process, as well as the purpose and key contents. This part of the EIR must be complete when issued to bidders for design or constructor tenders. | **The EIR should include:**  
Details of the information requirements:  
- Schedule of work stages (APM/RIBA/ICE/bespoke WBS)  
- Alignment of data drops to the work stages  
- Key purposes of data drops  
- Specific information requirements from the data drops, defined as responses to the ‘English Language Requirements’  
E.g.  
<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Drop</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>fees for Option Appraisal</td>
<td>-</td>
<td>Approved Outline Business Case</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Option Appraisal</td>
<td>1</td>
<td>Approved Outline Business Case</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Feasibility Study</td>
<td>-</td>
<td>Tender package</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Project Brief / Tender Model</td>
<td>2a</td>
<td>Tender package</td>
</tr>
<tr>
<td>Stage 5a</td>
<td>Initial Project Proposals Proposals (IPP)</td>
<td>2b</td>
<td>Appoint Constructor</td>
</tr>
<tr>
<td>Stage 5b</td>
<td>Developed Constructor Proposals (DPP)</td>
<td>3</td>
<td>Agree maximum price (submit DPP for evaluation)</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Construction</td>
<td>-</td>
<td>Practical completion / certificate A</td>
</tr>
<tr>
<td>Stage 7</td>
<td>Completion</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Guidance: The data required to populate the data drops will vary at each stage in accordance with the ‘Plain Language Questions’ that need to be supported by the data drops. These address the performance requirements which a project is required to meet to comply with the brief and wider regulatory requirements. The project team is required to provide information in the model to demonstrate compliance with questions associated with the data drops.  
An extract from a typical tabular format which is compatible with the CIC BIM Protocol and that can be used to communicate information requirement, content, formats and data originator is set out below:
In addition to models, drawings and analysis reports, the data drops will potentially also include some or all of the following project outputs. These should also be described in the data drop schedule:

- Cost Model/estimate/contract sum analysis
- Phasing analysis
- Floor area/accommodation schedules
- Approvals schedule
- Elemental Project Planning Model
- Site / Welfare Planning
- Construction Sequencing Model
- Temporary/Enabling Works/Logistics

A comprehensive data drop schedule will help to ensure that information requirements are clearly communicated to the project team/contractor.

**Stage 4: tender requirements**

<table>
<thead>
<tr>
<th>Heading</th>
<th>Description</th>
<th>BIM model</th>
<th>2D PDF drawings</th>
<th>2D DWG drawings</th>
<th>COBie-UK-2012</th>
<th>Documentation</th>
<th>Who?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall form and content</td>
<td>Overall zoning. Approximate scale of spaces and of the building as a whole. Required adjacencies and circulation pattern</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Client’s design team</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**1.3.2 Client’s Strategic Purposes**

The purpose of this section is to describe the expected purposes of the information provided using the COBie data exchange format. The CIC BIM Protocol does not specifically state the purposes for which models will be used. Setting out proposed purposes in the EIRs informs the scope of the licences defined in the Protocol.

The EIR should include:

It is expected that the primary use of the data will be for the following purposes:

- P01 Registration
- P06 Assessment and re-use
- P02 Use and utilisation
- P07 Impacts
- P03 Operations
- P08 Business case
- P04 Maintenance and repair
- P09 Security and surveillance
- P05 Replacement
- P10 Regulation and Compliance

Guidance: In circumstances where the employer intends to use elements of the model for a wider set of purposes (e.g. use of elements of design on more than one project); the additional use should be stated, together with the wording of the proposed licence.
1.3.3 BIM-specific competence assessment – this section details the information that a bidder should be required to provide as part of a bid submission. The scope of information described in 1.3.3 should be referred to in instructions to tenderers.

<table>
<thead>
<tr>
<th>Ref</th>
<th>Item</th>
<th>Description</th>
<th>Response</th>
</tr>
</thead>
</table>
| A   | BIM Capability and Experience | Responses will describe how mature an organisation is, and what capabilities are held | **The competence assessment should include:**
Tenderers should include the following detail:
- BIM experience - organisational and personnel
- BIM capabilities
- Out-sourced roles

*Guidance: The information requested in this section is detailed further in the Project Implementation Plan described in PAS 1192-2*

| B   | Evidence of BIM Execution Planning | Responses will include examples of BIM execution planning | **The competence assessment should include:**
Tenderers should include the following detail:
- BIM Execution Plans
- Lessons learnt

*Guidance: The content of the BIM Execution Plan at tender and start on site stages are described in PAS 1192-2*

| C   | Confirmation of BIM Toolset | Responses will describe the processes and procedures that make up the bidder’s BIM and information management toolkit | **The competence assessment should include:**
Tenderers should include the detail on procedures aligned with core project stages as follows::
- BS1192 (2007)
- PAS1192-2 (2013)
- COBie UK 2012
- Other bespoke processes

| D   | Details of BIM Workload and Resourcing | Responses will describe the resources (and what levels) that are available to the project | **The competence assessment should include:**
Tenderers should include the following detail:
- Resource matrix with level, number, utilisation
- Outsourcing details or services etc.

*Guidance: The content of the assessment is described as the supplier BIM assessment form described in PAS 1192-2*

| E   | Principal Supply Chain | Responses will describe the supply chain’s ability to link into the process and how will this be assessed | **This should/could include:**
Tenderers should include the following detail:
- Key supply chain partners
- Expected outputs
- Assessment process
2.0 Changes to other tender documents

The intention with the BIM Strategy designed to achieve BIM maturity Level 02 generally, is that changes to existing processes should be minimal. To this end, the insertions into the existing tender documents are also minimal.

The following are the questions or comments that have been used in early adopter projects.

Based on experience from the ‘Early Adopter Projects’ the recommendation of the BIM task Group is that the tender questionnaire should separate out the BIM Information processing from the asset design and specification for evaluation. These questions should never overlap.

The following general changes to tender documentation are recommended:

2.1 PQQ brief

Commentary is to be added to the brief clearly stating expectations with respect to the application of BIM on a project:

In addition, the Constructor is to note that this scheme will executed using Building Information Modelling (BIM) in line with the Government Construction Client Group BIM Working Party Strategy Paper. The Constructor must be capable of delivering this scheme while providing information in the requisite format. The standards, format and content are outlined in the document ‘Employer’s Information Requirements’ included in the tender information. The tender return assessment will include a review of the BIM submission, as outlined in the Tender Evaluation Plan and Tender Questionnaire.

2.2 Project Execution Plan

Commentary should be added describing the procedure for uploading models to collaborative environments:

Native models are to be uploaded to the client’s collaboration environment using the same procedure as for drawings with regard to file reference, issue sheets etc. Models naming conventions are included in the Client BIM Requirements document.

The issue sheet should include the software used to generate the model, plus the version.

2.3 Tender Questionnaire:

The following are exemplar questions which could be added to the Tender Questionnaire to address specific BIM issues:

<table>
<thead>
<tr>
<th>Q #</th>
<th>Question</th>
<th>Guidance notes (where applicable)</th>
<th>Format requirements</th>
<th>Weighting (%)</th>
</tr>
</thead>
</table>
| 1   | Design proposals and Building Information Models as required by the design brief | The Bidder shall submit models and COBie files which are compliant with the Employer’s Information Requirements for the project. The models and COBie files will be compared against those issued for tender to establish:  
  i. The fidelity of the information i.e. that the attributes and data contained within the tender models have been retained  
  ii. That the origin points, orientation, levels and units have been maintained  
  iii. The degree to which the models and COBie file have been developed  
  iv. That the COBie file is compliant with the COBie specification listed in the EIR’s | Native models and COBie file | x% |
<table>
<thead>
<tr>
<th>Q #</th>
<th>Question</th>
<th>Guidance notes (where applicable)</th>
<th>Format requirements</th>
<th>Weighting (%)</th>
</tr>
</thead>
</table>
| 1.2 | Provide a narrative on the BIM design and development process (rationale) | The narrative should describe how the Building Information Models have been developed from tender issue to tender return, giving a clear description of:  
1. What new elements, systems and components have been introduced  
2. For existing elements and components, what additional attributes have been added or populated  
3. What additional models have been provided as part of the tender submission e.g. acoustic and day lighting models to demonstrate how the technical solution has been developed.  
4. Where the information that appears in the COBie file is attributed to the models  
5. The order of precedence of the model files if data relating to a space or object appears in more than one model file  
6. How the models have been aggregated and coordinated  
7. Whether any external reference documents are linked to the model  
8. The tools or workflows that have been used to create and aggregate the COBie file from the models | To be defined by the Employer | x% |
| 1.3 | Provide a short narrative on how the Bidder Proposes to utilise BIM in the Design, Construction and Management of this project. Give examples of projects where you have previously utilised BIM in this manner | Your answer should consider the following elements  
1. Design Delivery  
2. Design Management, Coordination and Optimisation  
3. Standard Design Elements  
4. Design for Offsite Manufacture  
5. Costing (5D)  
6. Planning (4D)  
7. Collaborative and Common Data Environments  
8. Supplier Management  
9. Commissioning  
10. Operations & Maintenance  
11. Health & Safety | To be defined by the Employer | x% |
| 1.4 | Provide the headings for your standard BIM execution plan | The headings and rationale should be explained to give an understanding of the underlying processes and tools that the BIM execution plan will establish, and how the template for the execution plan has been developed. | To be defined by the Employer | x% |
| 1.5 | List the key BIM tools you use, with examples of projects where these have been implemented. | This should include tools / software used for:  
1. Authoring  
2. Aggregation and coordination  
3. Analysis  
4. COBie extraction and aggregation | To be defined by the Employer | x% |
### 2. Capacity

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1</strong></td>
<td>How many BIM trained users do you have and how do you plan to resource this project with staff capable of delivering BIMs and datasets?</td>
<td>This is relevant to the Office from which the work is managed and its relevant personnel. If BIM activities are to take place in a different office, please clarify.</td>
</tr>
<tr>
<td></td>
<td>To be defined by the Employer</td>
<td>x%</td>
</tr>
<tr>
<td><strong>2.2</strong></td>
<td>List your tier 1 main subcontractors and confirm how many BIM trained users they have and how they will resource this project with staff capable of delivering BIMs and datasets? How will you evaluate their capability?</td>
<td>If BIM activities are to take place in a different office, please clarify.</td>
</tr>
<tr>
<td></td>
<td>To be defined by the Employer</td>
<td>x%</td>
</tr>
</tbody>
</table>

### Tender Evaluation plan

Text should be added describing the process by which Building Information Models will be submitted during the tender process.

'BIMs are to be returned in their native format on a CD, which should also include the model issue sheet (to include the software type and version used to create the model) and the COBie file'