

# ***Employer's Information Requirements***

## **Environment Agency**

<b>Revision</b>	<b>Date</b>	<b>Amendment</b>
1.0	11/04/14	First issue.
1.1	06/08/14	Small amendments to several sections in line with feedback from the Sub Supplier Group.
1.2	12/09/14	Update of 1.2.3, 1.2.4, 1.2.10 & Removal of 1.3.2 with note on purposefully blank section 1.3.
1.3	11/10/14	Update of 1.1.2 and 1.2.3.
1.4	27/10/14	Update of 1.1.2 and 1.1.3.
1.5	13/11/14	Update of 1.1.1, 1.2.3, 1.1.4 and 1.1.5.
1.6	25/11/14	Small amendments to several sections
1.7	25/11/14	Update of 1.2.2 and 1.2.4
1.8	05/03/15	Introduction added and updates to 1.1.2, 1.1.3, 1.2.1, 1.2.2, 1.2.3 and 1.2.10
1.9	05/03/15	Introduction added and updates to 1.1.2, 1.1.3, 1.2.1, 1.2.2, 1.2.3 and 1.2.10
2.0	17/07/15	Updates to all sections and the addition of Section 1.3.1.

## 1.0 *Employer's Information Requirements*

### 1.0.1 Introduction

It is critical that we deliver Level 2 BIM across the major programme of projects in a way that is appropriate to the level of investment being made and provides the foundation for Level 3. Our approach is to keep it simple and deliver information as documents and associated data according to our specifications, until our more detailed object level data requirements can be defined and specified using the agreed commercial tools and PAS/BS 1192 standards.

This approach provides the backbone for digital project and asset management and positions FCRM Asset Management in a good place to share data with other Government bodies and support open data.

It is important not to think about BIM purely in terms of 3D modelling in projects due to the fact that significantly greater cost and value improvements can be created in gathering and utilising the data to maintain and operate an asset.

In simple terms BIM to the Environment Agency is all about intelligent information to make informed decisions.

This *Employers* Information Requirements document should be read in conjunction with the project level *Employers* Project Information Delivery Plan (PIDP).

## 1.1 Technical

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

Reference	Item	Description	Response
1.1.1	Software Platforms	Define the platform for the Building Information Model as well as other software platforms to be used	<p>Platforms and versions used by the <i>Employer</i> across the programme of projects include the following:</p> <ul style="list-style-type: none"> <li>• Collaboration – Asite, Adoddle Classic and Adoddle 17</li> <li>• Autodesk DWG TrueView 2015 &amp; Navisworks Freedom 2014</li> </ul> <p>All transmittals to and from the <i>Employer</i> will be made electronically via Asite. Excluding email which should be confined to general correspondence and not include any attached documents.</p> <p>Details of information exchange requirements are set out in 1.1.2, data exchange format. Consultants and contractors should configure their attribute data in their models to align with the data exchange format.</p>
1.1.2	Data Exchange Format	The purpose of this section is to define the formats used to deliver data.	<p><b>Information will be required in the following formats:</b></p> <ul style="list-style-type: none"> <li>• Native * discipline model files product specific for all design and analysis models</li> <li>• COBie file(s) – COBie BS1192-4 (Geographic ontology mapping at document level only, see 1.2.10)</li> <li>• Excel files (.xls)</li> <li>• PDF files – no older than version 7.0**</li> <li>• Programme Files 2003(.mpp)</li> <li>• Text files (.doc and .pdf) **</li> <li>• Photos (.jpg/ .png)**</li> <li>• Images / scans / sketches (.pdf)</li> <li>• Videos (mp4) **</li> <li>• Geotechnical Survey (.ags)</li> </ul> <p>Plus other formats to be confirmed.</p> <p><b>Data standards:</b></p> <ul style="list-style-type: none"> <li>• Date and Time –EA <a href="#">Date and time data standard</a> (v1.1)</li> <li>• Country Names – ISO 3166-3:2013</li> <li>• Address –EA <a href="#">address standard</a> (V0.2)</li> </ul> <p>Environment Agency uses Autodesk Navisworks for internal federation and visualisation and use of Autodesk Navisworks Freedom &amp; DWG TrueView as a generic model &amp; drawing viewers.</p>

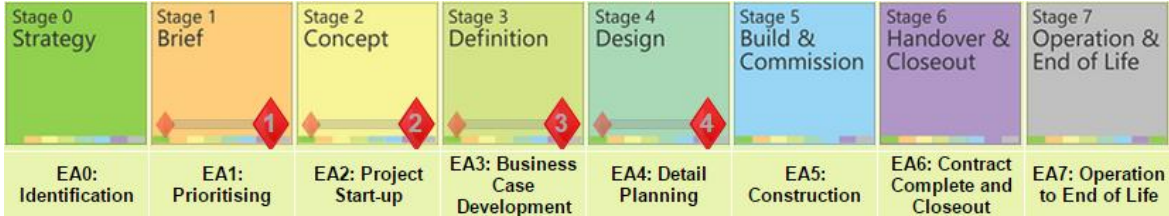
			<p>*Model(s) will be supplied in the native format used by the author and in Navisworks NWD format suitable for viewing on the <i>Employer's</i> IT system. Drawings will be supplied in AutoCAD DWG format.</p> <p>**All these formats should be date, time stamped and geo-referenced in the COBie file either directly or via a link to an Extent, Region or Feature which is geo- positioned by a 2 point bounding box. Pre existing photos where the date is not available to the nearest year.</p>
1.1.3	Co-ordinates	<p>The purpose of this section is to encourage the adoption of a common coordinate system for all BIM data with consistent adoption for all models.</p> <p>Defines requirements for the common coordinate system for all BIM data.</p> <p>Details modifications to imported DWG/DGN co-ordinates.</p>	<p>Eastings and Northings to British National Grid (x and y)</p> <p>Elevations to mAOD (Newlyn) (z)</p> <p>3D Co-ordinates to be no less accurate than 10mm in all directions (x,y,z).</p>

Reference	Item	Description	Response																											
1.1.4	Level of Definition	The purpose of this section is to define requirements for information submissions at project stages.	<p>The level of Model Definition (LOD) is to be delivered in line with PAS1192-2:2013 Figure 20.</p> <p>The proposed level of definition for each stage and deliverable is shown in the Information Delivery Plan for the project.</p> <p>An example of LOD for geometry progression is shown below for a simple embankment in isolation</p> <table><tr><th>Stage Name</th><th>Stage 0 - Strategic Definition</th><th>Stage 1 - Preparation and Brief</th><th>Stage 2 - Concept Design</th><th>Stage 3 - Developed Design</th><th>Stage 4 - Technical Design</th><th>Stage 5 - Construction</th><th>Stage 6 - Handover and Close Out</th><th>Stage 7 - In use</th></tr><tr><td>Level of detail (graphical)</td><td>Extent boundary</td><td>Region boundary Existing site information</td><td>Zone/Volume strategy boundary</td><td>Outline design level of detail</td><td>Construction level detail</td><td>Construction level detail with as built data added as completed</td><td>Full as built model</td><td>As built model with operational phase data added as created.</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Stage Name	Stage 0 - Strategic Definition	Stage 1 - Preparation and Brief	Stage 2 - Concept Design	Stage 3 - Developed Design	Stage 4 - Technical Design	Stage 5 - Construction	Stage 6 - Handover and Close Out	Stage 7 - In use	Level of detail (graphical)	Extent boundary	Region boundary Existing site information	Zone/Volume strategy boundary	Outline design level of detail	Construction level detail	Construction level detail with as built data added as completed	Full as built model	As built model with operational phase data added as created.									
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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 .	<p>Training for systems identified in 1.1.1 will be provided through team inductions and / or the provision of appropriate training material by the Environment Agency.</p> <p>The supplier will confirm the BIM training and upskilling plan for project staff.</p>																											

## 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.

Reference	Item	Description	Response
1.2.1	Standards	The purpose of this section is to define the BIM Standards that are incorporated into the <i>Employer Information Requirements and Information Delivery Plan</i> ,	<p>Definitions of the core documents and standards that are to be mandated on the project:</p> <ul style="list-style-type: none"> <li>PAS1192:2</li> <li>PAS1192:3</li> <li>Both supported by BS1192:2007</li> <li>BS1192:4 – Use of COBie – Geographic Ontology, see 1.2.10</li> <li>BS1192:5 Security</li> </ul> <p>Adoption of other standards related to Building Information Modelling:</p> <ul style="list-style-type: none"> <li>BS7000 series - Design Management Systems</li> <li>BS8534:2011 - Construction Procurement policies</li> <li>BS10012 - Data Protection</li> <li>PAS 55-1:2008 - Asset Management</li> <li>ISO55000 - Asset Management</li> </ul> <p>The BIM Execution Plan and its supporting documents are described in PAS1192-2 sections 4,6 &amp; 7 Specific response to the EIR and PIDP should be given in the suppliers BIM Pre and Post Execution Plan and related documents all as stated in PAS1192-2</p>
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.	<p>Existing documentation which define the responsibility and scope of appointments associated with roles in addition to:</p> <ul style="list-style-type: none"> <li>Project Delivery Manager (PDM) PAS1192-2 Table 2&amp;7.5</li> <li>Supplier Information Manager – PAS1192-2 table 2 and BIM Protocol</li> <li>Lead Designer – PAS1192-2 Table 2</li> <li>Task Team Manager – PAS1192-2 Table 2 and throughout section 9</li> </ul> <p>The following roles in connection with BIM will be taken on directly by the <i>Employer</i>:</p> <ul style="list-style-type: none"> <li><i>Employer</i> Information Manager – at project level, unless stated otherwise will be the Project Manager.</li> </ul> <p>Roles associated with the management of information on BIM-enabled projects are described in outline in PAS 1192-2:2013.</p> <p>An outline scope of service for the role of Information Management has been published by CIC.</p> <p>All of the roles described in PAS 1192-2 are expected to be undertaken within the scope of existing appointments.</p>

Reference	Item	Description	Response
1.2.3	Planning the Work and Data Segregation	The purpose of this section is to set out requirements for the bidder's proposals for the management of the modelling process	<p>Information should be managed in accordance with the processes described in PAS1192-2, PAS1192-3:2014 and BS1192 (2007)</p> <p>The unified digital plan of work stages with local stage names as shown below must be used throughout.</p>  <p><b>Information Delivery Plan (IDP)</b></p> <p>This is the plan of uniquely referenced file based information deliverables or products, to be delivered in agreed formats, level of detail &amp; information definition, at the plan of work stages by the assigned supplier, as required in the supply team appointment process. This includes and takes precedent over any MPDT as the above standards. This is the single and collaboratively agreed information delivery plan for the project between the supply (tier 1) team(s) and <i>Employer</i>, managed by the <i>Employer</i> appointed Project Manager in the <i>Employers</i> CDE.</p> <p>The Project Information Delivery Plan (PIDP) will be provided in a PDF format with the tender documents. The suppliers Pre-BIM Execution Plan should include a mark-up of the PDF with any comments and proposed alterations to the PIDP justified. Suppliers may omit or add items in their proposal to meet the outcome. All proposed changes to the PIDP should be clearly stated and justified.</p> <p>In the PIDP the following applies:</p> <ol style="list-style-type: none"> <li>Where Native format is required the deliverable file or files should be provided in the proprietary/ native format.</li> <li>Where Assurance (ASS) is required the deliverables should only be provided on request and should be held in the suppliers CDE.</li> <li>Where Open Format (O/S) is required these should be provided in addition to PDF.</li> <li>Where 3D Model Format (3DMF) is required, the deliverable should be federated into models in suitable formats to a level of detail appropriate to the stage. Fully rendered models should only be provided if specified in the stage note on the PIDP.</li> </ol> <p><b>Common Data Environment (CDE)</b></p> <p><b>Project/Supplier CDE (P-CDE)</b></p> <p>The P-CDE managed by the nominated Supplier Information Manager to the above standards. The P-CDE may be managed by the Consultant information manager or the Contractor information manager or the Joint Venture information manager but there can only be one P-CDE at any one time.</p>

			<p><b>Employer CDE (E-CDE)</b></p> <p>The <i>Employer's</i> common data environment managed by the <i>Employer's</i> Project Manager to the above standards. There will be one <i>Employer</i> CDE per project.</p> <p><b>Employer Shared Information</b></p> <p>Information shared for authorisation (PAS1192-2 9.2.2.3) from P-CDE to E-CDE will have the purpose clearly marked in the file name status field and not to be relied upon other than for the shared purpose. This information issued from the P-CDE to the E-CDE will remain as Shared in the E-CDE and not be Published or otherwise transmitted. For consistency <i>Employer</i> Shared means Client Shared in PAS1192-2.</p> <p><b>Employer Published Information</b></p> <p>Information published in the P-CDE (PAS1192-2 9.2.2.6) and transmitted to the <i>Employer</i> across the contract line P-CDE to E-CDE, as specified in the agreed Project Information Delivery Plan, and to be relied upon at the particular Level of Definition and the Plan of Work stage. This information will be validated and Published in the E-CDE.</p> <p><b>Model Management</b></p> <p>All models will be managed, coordinated and developed in a supplier managed Project CDE to the above standards. The Project CDE will Share &amp; Publish exchange information to/from <i>Employer</i> under the management of the nominated Supplier Information Manager.</p> <p><b>Information Exchange</b></p> <p>Information will be exchanged between the P-CDE and E-CDE as packages of electronic files in the appropriate format and for the IDP products to be exchanged at the particular plan of work stage.</p> <p>Exchange file packages will consist of one or more exchange files and a COBie format file acting at least as a transmittal sheet with the contained package files listed in the Documents Tab to confirm transmittal contents.</p> <p>All contained files shall be named to the file naming standard below.</p> <p>Exchanged files will be verified by the file name as part of the E-CDE upload or receipt process. Only correctly named files will be accepted. Correctly named files will be uploaded/accepted by the E-CDE without further profiling into the correct folder structure position.</p> <p>Published files will validated against the COBie file both for document and data content and the COBie Information Requirements file for the project. COBie structure and formats are covered in section 1.2.10.</p> <p>Packages failing validation will be passed to the E-CDE Archive with a generated Red Amber Green (RAG) Report confirming the basis of failure. Notice of this failure and the RAG report will be transmitted to the P-CDE. Only completely validated file packages will be published.</p> <p>Packages passing validation will be passed to the E-CDE Published area with the generated Red Amber Green (RAG) Report confirming the event. The COBie data and file linkages will be extracted and saved in the E-CDE Published database passing superseded data objects into the E-CDE Archived database. Published and Archive data and files will be available as a linked set of information for query based reporting and extraction.</p> <p><b>File Management</b></p> <p>All files making up the agreed IDP deliverables should be managed within and via the P-CDE as part of the Project Information Model and Shared or Published to the E-CDE with a covering COBie sheet. Use agreed formats, LOD and packaging as defined in the project IDP.</p>
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			<p><b>File Naming</b></p> <p>File naming is required to be in accordance to BS1192:2007 and PAS1192-2:2013, and all file uploads to EA E-CDE (Asite) should be named to the following file name structure. Fully named and dash delimited file names will drag and drop upload without the requirement for manual profiling. The file document reference created in the E-CDE will be in accordance with BS1192:2007 and PAS1192-2:2013.</p> <p><b>[ProjRef]-[Author]-[Volume]-[Location]-[Type]-[Role]-[FileNum].ext</b></p> <p><b>1 ProjRef :</b> Environment Agency assigned programme or project reference  <b>2 Author :</b> Environment Agency assigned Author Code  <b>3 Volume :</b> Supplier assigned as PAS1192-2:2013 optional Volume/Zone or 00 for all volumes or if omitted  <b>4 Location:</b> Supplier assigned as PAS1192-2:2013 optional Level/Region/Location or zz for multiple, or xx if omitted  <b>5 Type:</b> Supplier assigned as BS1192:2007 document/model/information type  <b>6 Role:</b> Supplier assigned as BS1192:2007 Role  <b>7 File Num:</b> Supplier assigned unique &amp; sequential file alphanumeric document number</p> <p>To aide with the efficiency of meta data provision when uploading any deliverables to the employers CDE the following meta data can be optionally added to the end of the BS1192 -2007 and PAS 1192-2:2013 file name which if included will be automatically profiled by the E-CDE.</p> <p>Alternatively if this approach is not taken the meta data can be manually profiled for each deliverable on upload.</p> <p>The download of files from the E-CDE that have this meta data can be completed with the option to have the file name in accordance with BS1192-2007 and PAS 1192-2013 with the addition or not of the metadata added to the end.</p> <p><b>8 Status:</b> Supplier assigned as PAS1192-2 Status/Purpose of Issue – see Shared &amp; Published status codes below  <b>9 Rev:</b> File revision  <b>10 DelRef:</b> Environment Agency assigned IDP Delivery Product Ref  <b>11 Stage:</b> Environment Agency assigned Plan of Work Stage (PoW) EA0 – EA7 appropriate to the IDP Product  <b>12 LOD:</b> Environment Agency Level of Definition (LOD0 – LOD7) appropriate to the IDP Product or DOC if a document  <b>13 Title:</b> Supplier assigned free text descriptive title or name</p> <p><b>[ProjRef]-[Author]-[Volume]-[Location]-[Type]-[Role]-[FileNum]-[Status]-[Rev]-[DelRef]-[Stage]-[LOD]-[Title].ext</b></p> <p><b>Shared &amp; Published File Status Codes</b></p> <p>PAS1192-2:2013 Table 3 Status Codes should be used in the exchanged file names for Status in all cases apart from stage</p>
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			<p>based Published files which should have the following:</p> <table><tr><th>Status Code</th><th>Description</th></tr><tr><td>A0</td><td>Published Strategy Files</td></tr><tr><td>A1</td><td>Published Brief Files</td></tr><tr><td>A2</td><td>Published Definition Files</td></tr><tr><td>A3</td><td>Published Concept Files</td></tr><tr><td>A4</td><td>Published Design Files</td></tr><tr><td>A5</td><td>Published Build Files</td></tr><tr><td>A6</td><td>Published Handover Files</td></tr><tr><td>A7</td><td>Published Operation Files</td></tr></table> <p><b>Pre and Post BIM Execution Plan</b></p> <p>Both consultant and contractor documents should be presented as defined in PAS1192-2. These will confirm the project related interpretation, operation, management and delivery of deliverable products to the Information Delivery Plan and this document. Both documents must respond specifically to this EIR and the Project Information Delivery Plan.</p> <p><b>Drawings</b></p> <p>Where drawings are extracted from models the parent model should clearly displayed in the title block (by file name/no and title)</p> <p>Where drawings are NOT extracted from models this fact should be clearly displayed in the title block ('Not from model')</p> <p><b>Federated Models</b></p> <p>Federated models should clearly display the constituent native models by file reference and title.</p> <p>Additional content should be clearly displayed</p> <p><b>Model or Object Libraries</b></p> <p>Where a commercial or in house model or object library is used irt should be clearly referenced and displayed in the model</p> <p>The Environment Agency is currently developing its own model library in COBie format which should be included and take precedent when issued.</p> <p>The supplier will take full responsibility for information detailed with the use of third party model or object libraries.</p> <p><b>Reference to <i>Employer</i> or Third Party Issued Files</b></p> <p>Where content is taken from a reference or <i>Employer</i> issued drawing or schedule this should be clearly indicated</p> <p><b><i>Employer</i> Issued Paper Documents</b></p> <p>Where paper files are discovered, published, shared or lent from the <i>Employer</i> or other third party, these documents should be scanned and published or shared back to the <i>Employer</i> as part of a document issue linked to an appropriate deliverable to the <i>Employer</i> CDE</p>	Status Code	Description	A0	Published Strategy Files	A1	Published Brief Files	A2	Published Definition Files	A3	Published Concept Files	A4	Published Design Files	A5	Published Build Files	A6	Published Handover Files	A7	Published Operation Files
Status Code	Description																				
A0	Published Strategy Files																				
A1	Published Brief Files																				
A2	Published Definition Files																				
A3	Published Concept Files																				
A4	Published Design Files																				
A5	Published Build Files																				
A6	Published Handover Files																				
A7	Published Operation Files																				

1.2.4	Security	The purpose of this section is to communicate client specific security measures required in order to secure the data	<p>Any project file when uploaded or transmitted by any means is to be secure to the standard required by the <i>Employer</i>.</p> <p>For this project, security is defined in accordance with business impact levels defined in the HMG Security Policy Framework as follows:</p> <ul style="list-style-type: none"> <li>• IL1 – not protectively marked</li> <li>• IL2 - protect</li> <li>• IL3 – restricted</li> <li>• IL4 – confidential</li> </ul> <p>Default position is IL2 unless IL1 or IL3 is specified.</p> <p>There are three classifications in the Government Security Classifications relating to document security which are defined according to the consequences of any loss or unauthorised release of the information.</p> <p>The details of applying these are available from Operational Instruction <a href="#">527 14</a> released on the 17<sup>th</sup> March 2014.</p> <p>Please refer to PAS1192-5:2015 for guidance in all security matters, authors and holders of information must act as required in accordance with this specification. Reference should be made to the Security Triage process and Security Champion for the project, if appointed.</p>
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Reference	Item	Description	Response
1.2.5	Coordination and Clash Detection	The purpose of this section is to define the required co-ordination process, together with requirements for quality control?	<p>Provide details of the following within the BEP on coordination, clash prevention and detection process in line with PAS1192:2:</p> <ul style="list-style-type: none"> <li>• Details of the clash prevention process including: <ul style="list-style-type: none"> <li>○ Software</li> <li>○ Process overview</li> <li>○ Responsibilities</li> <li>○ Outputs</li> </ul> </li> <li>• Technical query workflow</li> <li>• Tolerance strategy</li> <li>• Clash resolution process</li> </ul>
1.2.6	Collaboration Process	The purpose of this section is to define how, where and when project information will be shared	<p>Details of the collaboration process sufficient to demonstrate competence and capability. It is expected that full details of the process will be included within the completed BIM Execution plan. Details of the process should include the following:</p> <ul style="list-style-type: none"> <li>• Form of sharing (Common Data Environment and process)</li> <li>• Extent of model i.e. reduced LoD</li> <li>• Frequency of collaboration and information exchange</li> <li>• Details of model review workshops and other collaborative working practices</li> </ul>
1.2.7	Health and Safety/ Construction Design Management	Request for details on 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.	Provide details of how BIM enabled processes will be used to manage the <i>Employer's</i> , consultants and contractors H&S / CDM obligations, sufficient to demonstrate competence and capability at tender.

Reference	Item	Description	Response
1.2.8	Systems Performance	The purpose of this section is to communicate to bidders any constraints in the <i>Employer's</i> systems or specific IT requirements which may need additional resources or non-standard solutions.	<p>The following <i>Employer</i>-side IT system restrictions and requirements need to be taken into account when developing the BIM Execution Plan:</p> <ul style="list-style-type: none"> <li>Model size (100 Mb)</li> </ul>
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	<p>It is expected that the suppliers proposals for model and data compliance will be detailed within the BIM Execution plan, to include:</p> <ul style="list-style-type: none"> <li>Quality assurance/control procedure</li> <li>Associated software</li> <li>Level of assurance</li> </ul>
1.2.10	Delivery Strategy for Asset Information	This section defines the information exchange standard for asset information and enables the <i>Employer</i> to obtain proposals with regards to asset information delivery into the <i>Employer's</i> AM environment.	<p><b>COBie Information Requirements (CIR)</b></p> <p>This master COBie workbook is provided by the <i>Employer</i> and is held on the E-CDE with the project Information Delivery Plan and acts as a template for COBie preparation and submission.</p> <p>This workbook is to the Geographic ontology required for the project and contained document level attributes for the delivery products. It also contains reference to the individual LOD and bounding box location requirements.</p> <p>Where a CIR is not available the sheet will be built by the consultant/contractor as applicable.</p> <p>Information Exchange Packages will include a single COBie UK 2012 format spreadsheet based on the CIR where available, with the following scope and Geographic naming ontology.</p> <p><b>Geographic Naming Ontology</b></p> <p>BS1192-4 covers information exchange with COBie as above and enables the adoption of an alternate naming ontology. The Environment Agency have adopted the Geographic ontology as follows and all exchanged COBie spreadsheet formats will be in the format both for tab names and related column headings.</p>




			<table border="1"> <tr> <td>2 point</td><td>Easting</td><td>Northing</td><td>Elevation</td></tr> <tr> <td>Bottom Left</td><td>a</td><td>b</td><td>c</td></tr> <tr> <td>Top Right</td><td>d</td><td>e</td><td>f</td></tr> </table> <p>Where</p> <p>a &lt;= d, e &lt;= b, c &lt;= f</p> <p><b>COBie Spreadsheet Structure – Completion &amp; Validation Rules</b></p> <p>The completion of the COBie sheet should follow the following rules stated in advance of the publication of BS1192-4. This document however takes precedence.</p> <p>The COBie Information Requirements (CIR) spreadsheet downloaded for the project stage should where possible be used as the template container for Information Exchanges. This spreadsheet will contain the IDP deliverable information items (products), placeholders, data and formats required.</p> <p>The following is required</p> <ul style="list-style-type: none"> <li>A blank row should not occur before a row containing data or header.</li> <li>Data types should be respected.</li> <li>Dates should be presented in ISO style '2012-03-15T12:45:00' and '2012-03' as appropriate.</li> <li>In cell Lists (including local classifications) should be comma delimited and not contain other non- separator commas.</li> <li>Uniqueness of information should be ensured. Names should be unique within their sheet.</li> <li>Names should not contain commas or double spaces.</li> <li>Contacts should be named by use of their valid email address. In the case of a company the email use for transmittal issue and receipt validation should be used. It may be that email transmittals will be adopted into the E-CDE and will need to be from a known email address on the project.</li> <li>Names should not use punctuation nor unusual characters (e.g. &amp;, %, ' , " , &lt; , &gt;).</li> <li>Classifications should use the colon to separate code from description and should not use commas.</li> <li>Length, Area and Volume and Currency values should be consistent with the units selected on the Extent sheet</li> <li>Numeric values should be provided without units appended.</li> <li>Unknown values or values intentionally left blank should be entered as "n/a"</li> <li>The External System identifiers such as Global unique Identifiers's (GUIDs) should be maintained.</li> <li>Any deliverable should be assessed for completeness by applying the appropriate review and testing before the information exchange.</li> <li>The information provided should reflect the intended or actual Facility. Every identifiable Feature (area or location) should be registered. Every manageable Component should be registered.</li> <li>The relevant groupings used to manage the assets should be provided. Every identifiable Feature (area or location)</li> </ul>	2 point	Easting	Northing	Elevation	Bottom Left	a	b	c	Top Right	d	e	f
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			<p>should be assigned to at least one Zone and to a Region. Every manageable Component should be assigned to at least one System and to a Type.</p> <p>Document entries should be provided for any documents and models forming part of the COBie deliverable package.</p> <p>There should be one Extent row and linked to a single bounding box Coordinate pair.</p> <p>There should be at least one Region row for the proposed or actual Site and linked to a single bounding box Coordinate pair.</p> <p>Each stage IDP Deliverable entry should have completed Attributes as indicated for the appropriate LOD and linked to the appropriate Feature, Region or Extent and so be geo-located to a bounding box Coordinate pair. IDP Deliverables not linked to a Feature, Region or Extent row should be linked to a bounding box Coordinate pair.</p> <p>The IDP Deliverables are stated in the COBie Information Requirements Documents Tab including the associated Document file name mask that should be used for all submitted document and completed by the supplier.</p> <p>There should be at least one document entry for each stage IDP Deliverable entry and linked to that entry.</p> <p>The process and standard for Document naming meeting these requirements should be confirmed in the Pre BEP.</p> <p>Document entries are required to be Published for all stage Deliverables prior to the end of the appropriate stage contained in a single COBie sheet.</p> <p>A COBie sheet may also be included as part of a Shared Information Exchange where appropriate.</p> <p>The File name will be used to verify all IDP Deliverable files are included in the Published package and present in the E-CDE. Incomplete or invalid published information exchanges may not be accepted.</p>
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## 1.3 Commercial

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

Ref	Item	Description	Response
1.3.1	Information Exchanges and project deliverables	<p>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</p>	 <p>The schedule of work stages is shown on the Project Information Delivery Plan (PIDP) for the project. This maps onto the 8 stage digital Plan of Work shown above.</p> <p>The PIDP details the required Information Deliverables for each stage including required formats, model federation and level of definition.</p> <p>Information exchanges (green circles) Publishing the required PIDP Stage Deliverables will occur prior to each stage boundary by the stage Lead Supplier to support the Employer stage gateway process, gateway Plain Language Questions (PLQ) and gateway decisions (red diamonds). The PLQ are available on the online PIDP by clicking the red diamonds</p> <p>Previous information collected in the course of the project is available in the E-CDE from the start of the stage and following conclusion of the preceding stage gateway process.</p> <p>Information: models, documents and data, may be Shared into the E-CDE at any stage for Employer and Employer Stakeholder collaboration and comment.</p> <p>Stage deliverables required by the PIDP will be Published back to the E-CDE prior to the end of the stage to enable the information: models, documents and data, to be verified, accepted and published, and engage the gateway process.</p> <p>Full details of the Published files should be contained in the returned COBie file together with associated Attribute and bounding box data linked as described in section 1.2.3.</p> <p>The stage information purposes are shown in section 1.3.2</p> <p>Delivery of a stage includes validation of Published information: models, documents and data, to the PIDP by the Employers Project Manager.</p>

1.3.2	Client's Strategic Purposes	This section is intentionally left blank.	<div>The purpose of the Published Deliverables will be commensurate with the stage and stage gateway definition as section 1.2.3. eg Published Purpose A1 as Stage 1</div> <table><tr><th>Published Purpose</th><th>Description &amp; information use</th></tr><tr><td>A0 Identification</td><td>Identify and classify a new candidate project for the Programme</td></tr><tr><td>A1 Prioritising</td><td>Analyse and prioritise new candidate projects for the Programme.</td></tr><tr><td>A2 Project Start-up</td><td>Determine whether a project should continue to the next stage or not.</td></tr><tr><td>A3 Business Case Development</td><td>Ensure there is an appropriate assessment of the project risks and of how the project benefits will be delivered.</td></tr><tr><td>A4 Detail Planning</td><td>Detail planning in accordance with the approved business case and approval by the Environment Agency of the detailed design.</td></tr><tr><td>A5 Construction</td><td>Construction of the asset.</td></tr><tr><td>A6 Construction Complete &amp; Closeout</td><td>Construction completion and handback of the asset.</td></tr><tr><td>A7 Operation to End of Life</td><td>Operation, maintenance and disposal of asset.</td></tr></table>	Published Purpose	Description & information use	A0 Identification	Identify and classify a new candidate project for the Programme	A1 Prioritising	Analyse and prioritise new candidate projects for the Programme.	A2 Project Start-up	Determine whether a project should continue to the next stage or not.	A3 Business Case Development	Ensure there is an appropriate assessment of the project risks and of how the project benefits will be delivered.	A4 Detail Planning	Detail planning in accordance with the approved business case and approval by the Environment Agency of the detailed design.	A5 Construction	Construction of the asset.	A6 Construction Complete & Closeout	Construction completion and handback of the asset.	A7 Operation to End of Life	Operation, maintenance and disposal of asset.
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