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Scenario

You are the lead consultant in charge of delivering a 'state of the art' infant school in Swansea. The project is a joint funded venture with the Welsh Government, under the 21st Century schools programme and is required to meet the standards of BIM maturity (Level 2)

Your client Swansea Council has asked you to outline measures that will be taken to show competency of the project team in reaching the BIM Maturity requirements.

(Set up a company name, business address, company details and imagined employers and consultant partners).

Assessment 1 (50%) 2500 words

Draft a letter to the client that highlights your understanding of the requirements of BIM maturity for this project giving details on how information will be shared, coordinated and managed through the appropriate international standards. (Suggested 1000 words)

Appended to your letter, prepare an outline BIM Execution plan which should include and the following 5 sections:

- Project Information
- Management
- Planning and Documentation
- Standards, Methods, and Procedures
- IT Solutions

Digital Submission:

- Letter to the client with appended BEP.
- Appropriate naming conventions should be applied for the BEP.

Assumptions:

- Project Number: 5010
- Project Title: Ysgol Bae Abertawe
- Description: 1 form entry infant school for 90 pupils, with 48 PT Nursery provision.



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25th of October 2022

City and County of Swansea
Civic Centre
Oystermouth Rd
Swansea
SA1 3SN

REF: 5010–Ysgol Bae Abertawe, Slipway Rd, Swansea SA1 1YB

Dear Mrs L Williams,

Following our pre-contract meeting (12/10/2022), I am writing to you on behalf of Dragon Design Ltd to outline the Building Information Modelling (BIM) measures that Dragon Design Ltd, and relative parties, will implement during project 5010 – Ysgol Bae Abertawe.

As my colleague Mr Langley (BIM Manager) described during his presentation at the pre-contract meeting, BIM is the collaborative and progressive process of producing, sharing, and maintaining information for a built asset (Autodesk, n.d.). It allows for the systematic integration of multidisciplinary data and workflows to create a digital representation of an asset. By integrating teams, data, and workflows throughout every stage of the RIBA Plan of Works 2020, BIM brings intelligence and efficiency to project execution. (Autodesk, n.d.)

In short, BIM is divided into the following maturity levels:

- Level 0: The project encourages no collaboration and relies on paper-based 2D CAD drafting techniques. (United-BIM, 2019)
- Level 1: The project encourages little to no collaboration but employs 2D and 3D CAD drafting techniques. The 2D CAD is utilised for statutory approval documentation and project information, whereas the 3D is typically applied to conceptual work. The project data is distributed electronically using a contractor-managed common data environment (CDE). (United-BIM, 2019)
- Level 2: A step up from level 1, a level 2 project encourages collaboration by efficiently sharing project-relevant information and 3D CAD models with relative parties via a common file format. Each party can develop and share their own local 3D CAD model, which is then combined to form a federated BIM model. (United-BIM, 2019)
- Level 3: Not fully defined, but it is thought to be a more in-depth collaborative process involving all relevant parties and a shared model saved in a central source. At this level, all relevant stakeholders can work on the same model simultaneously, theoretically reducing the amount of contradicting data. (United-BIM, 2019)



As part of the 21st Century Schools Programme, this project (5010) must meet BIM maturity Level 2 as specified in the BIM protocol provided by the Welsh Government (joint funders of the project).

At Dragon Design Ltd, we are recognised and approved to BIM Level 2 standard by BRE Global and were awarded BIM Level 2 Business Systems Certification in June of 2020 (Appendix A). We then achieved the British Standards Institute (BSI) Kitemark Certification for BIM Design and Construction in 2021. To attain these accreditations, our Standards, Methods and Procedures were evaluated for ISO 19650-2:2018 conformity by two individual and impartial parties, followed by regular onsite compliance audits. (Whyte, 2019)

The prerequisites to ensure attainment of such maturity on this project are outlined below, as well as a draft BIM Execution Plan (BEP) for your perusal. NB: The BEP is a live document and should be treated as such – amendments will be made as new information becomes available.

To achieve Level 2 requirements, the employer must first submit an Exchange Information Requirements (EIR) –which is currently unavailable for project 5010. The EIR is a document that lays forth explicit instructions for the technical, management, and commercial aspects of a built asset –from development to operation. (The CAD Room, n.d.) The document must include information about the model being developed, establish the processes and procedures for developing, naming, and distributing information, provide clear definitions of information-related roles and responsibilities, and provide delivery plans that specify what deliverables should be delivered and when. This will provide a clear picture of the required models, who they are required from, and the roles that each model plays in the entire project. (Scottish Futures Trust, 2020)

Upon receipt of the EIR, a pre-contract BIM Execution Plan (BEP) can then be developed. NB: The attached BEP we (Dragon Design Ltd) have drafted for the Ysgol Bae Abertawe project, where no EIR has been submitted, is for post-contract purposes and must therefore be developed as more information becomes available. The key objective of the pre-contract BEP is to demonstrate the suppliers proposed methodology, capability, experience and capacity of the team by using a Project Implementation Plan (PIP) strategy. (Scottish Futures Trust, 2020) The BEP will define collaboration and information modelling goals and EIR requirements and project milestones via a Project Information Model (PIM) delivery strategy. (Scottish Futures Trust, 2020)

Following the agreement and commitment of all necessary parties to the pre-contract BEP will serve as the foundation for the post-contract BEP, which will be developed extensively and will help oversee the delivery of the project. (Scottish Futures Trust, 2020) The post-contract BEP is a live document that will evolve in detail as new supply chain members are assigned. The post-contract BEP includes, but is not limited to, the following:

- Response to the Exchange Information Requirements
- Amended Project Implementation Plan
- Responsibility Matrix (Defined roles and responsibilities for the development of data and models for each project stage –as well as to what Level of Definition)
- Details of: Management Planning and documentation
- Methods and procedures
- Task Information Delivery Plan (TIDP) (Task-specific federated list of information –including format, date and responsibilities) (BSI, 2018)
- Master Information Delivery Plan (MIDP) (The primary plan for managing data distribution throughout the project lifecycle.)



Throughout the contract, compliance with the BEP will be monitored to ensure that the PIM is being produced in accordance with the MIDP and all appropriate standards. (Scottish Futures Trust, 2020)

The way data is shared, accessed, and formatted is critical to ensuring that the project achieves Level 2 maturity. The requirement to securely manage, store, and communicate complex information will increase as the project progresses and will be managed through a Common Data Environment (CDE). A CDE provides a single point, shared workspace/platform where all key stakeholders can store, alter and manage project data during the development process of a project. (The CAD Room, n.d.) It provides a platform for alterations to be recorded, distributed, and resolved on a secure, connected system (commonly cloud-based) and promotes communication and collaboration with all project members. (Voditel, 2020) All project participants will be able to access the information housed in the CDE, as a uniform classification system with a common language will be implemented to ensure that all stakeholders know exactly what they're searching for and where to find it. (The CAD Room, n.d.)

In addition to assets established in a 'BIM environment,' the CDE will include documentation, graphical models, and non-graphical assets. (McPartland, 2016) All non-graphical data will be stored, updated and shared in a central spreadsheet known as a Construction Operations Building Information Exchange (COBie). This spreadsheet will ensure that the data meets the project's criteria and support the future maintenance and operation of the building. (The CAD Room, n.d.) At each stage of the information delivery cycle, this project data, including an Asset Information Model, will be produced and delivered to the client upon project completion to aid in the building's post-construction management. However, the handover process will begin early in the project to ensure a 'soft landing' with continued support from the project team post-handover. (The CAD Room, n.d.)

I trust the above is self-explanatory; however, should you have any queries, please do not hesitate to contact either myself or any member of the Dragon Design team.

Regards,

Owen Towell
Director of Dragon Design Ltd

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(02920) 887434
owen@dragondesign.com



Certificate of Approval

Certificate Number: BIM10049

Issue: 03

This is to certify the BIM Level 2 capabilities provided by

Dragon Design Ltd

are in accordance with the requirements of

ISO 19650 BIM Business Systems Certification

(Organization and digitization of Information about buildings and civil engineering works, including building information modeling (BIM) – Information management using building information modeling), having complied with the requirements of ISO 1950 BIM Business Systems Certification, outlines in Scheme Document SD244 Rev 0.0

Dragon Design Ltd is subject to periodic surveillance and is licensed to use the BRE Global Certification Mark on documentation directly related to BIM Level 2 capabilities.

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BIM Role(s)

Lead Consultant



Signed for BRE Global Ltd

Laura Critien

Certification Manager

20 June 2020

Date of this Issue

20 June 2020

Date of First Issue

19 June 2023

Expiry Date



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Post-Contract Building Information Modelling(BIM) Execution Plan (BEP)

Project Number: 5010
Project Name: Ysgol Bae Abertawe
Project Address: Slipway Rd, Swansea SA1 1YB
File Name: 5010-DDLTD-XX-XX-T-Z-0001-POST_BEP-S0

Date: 15/10/2022

Document No: 0001
Date: Oct. 2022
Revision: P01
Status: S0 -Work in Progress

Document Control Sheet

Rev.	Status	Page Nos.	Amendment	Date	By
P01	S0	Document	N/A	15/10/2022	OT

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BIM Design and Construction

5010-DDLTD-XX-XX-T-Z-0001-POST_BEP-S0

BEP Plan © Dragon Design Ltd

The Post-Contract Building Information Modelling Execution Plan (BEP)

Preface

Dragon Design Ltd has developed this post-contract BEP to demonstrate our intended methodology, as well as the capability, capacity, and competence of their team and supply chain, in order to meet the Exchange Information Requirements*. This BEP is designed to meet the requirements of BS EN ISO 19650-2:2018 and is intended for usage by Dragon Design Ltd, Swansea City & County Council, and the Welsh Government.

*The EIR is currently unavailable.

Document Authority

This BEP has been agreed by the representatives of the delivery team (see section 2.1) with the authority of their parent companies to accept this document for the stated project and use.

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1. Project Information

Table 1 – Project Information

Project Name	Ysgol Bae Abertawe
Project Address	Slipway Rd, Swansea SA1 1YB
Project Number (Client's Project Number or Reference)	5010
Client /Employer	Swansea City & County Council /Welsh Government
Scheme	21 st Century Schools Programme /Sustainable Communities for Learning
Contract Form	TBC
Project Description (EIR)	TBC –No EIR issued
Project Brief and CDM Requirements	1 form entry infant school for 90 pupils, with 48 part time nursery provision. No formal EIR issued.
Project Deliverable as defined in the EIR and COBie	TBC –No EIR or COBie issued

1.1 Project Background

Welsh Government has partnered with local authorities to construct a generation of 'state of the art' schools as part of the 21st Century Schools Program /Sustainable Communities for Learning. Project 5010 is for the construction of a new infant's school with a capacity of 90 students and 48 part-time nursery students. The site lies north of the Swansea Observatory and south of Trawler Road. Demolition of an existing boathouse, statue, and retaining wall is required. As per the Welsh Government BIM Protocol, the project must attain BIM Maturity Level 2 and comply with BS ISO 19650.

1.2 Project Milestones

Table 2 – Proposed project milestones. TBA.

Milestone	Proposed Dates
Design Start Date	Feb 2023
Construction Start Date	May 2023
Construction Completion	March 2024
Handover (Soft)	September 2023 – June 2024

NB: to be confirmed once more information is made available.

2. Information Required by the EIR

As per BS EN ISO 19650-2:2018, Clause 5.1.2, the appointing party shall establish the project's information requirements to comply with Clause 5.3, to address the appointing party needs answer(s) at each of the key decision points throughout the project. (BSI, 2018) As no EIR is currently available for the project, information on the following subsections of the BEP is required to be provided in proposals to the appointing party.

2.1 Planning of Work and Data Segregation

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR.

The project's work planning and data segregation aspects are covered in the subsequent sections of this BEP.

2.2 Co-ordination and Clash Detection

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR.

The suppliers' proposals for managing the coordination process are contained in this section of the BEP.

2.3 Collaboration Process

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR.

As described in section 4.

2.4 Health and Safety/CDM Management

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR.

The bidders' proposals for utilising BIM and the Common Data Environment to support the management of health and safety and CDM regulations are contained in this section of the BEP.

2.5 Compliance Plan

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR.

The suppliers' proposals for managing the coordination process are contained in this section of the BEP. See Section 2.2 for more information.

3. Management

3.1 Delivery Team Representatives and Roles

This BEP nominates the below competent person(s) to fulfil the named responsibilities as to who will conduct the information management functions of the Appointing Party (SCCC), Lead Appointed Party (Dragon Design Ltd) and Appointed Parties for the project delivery in accordance with BS EN ISO 19650-2:2018 Clause 5.3.1 and 5.4.1.

Table 3 – Equivalent UK Terms for Terms Used in ISO 19650 (BS EN ISO 19650-2:2018)

Term (within ISO 19650)	UK Equivalent(s) Explanation	Description
Lead Appointed Party	Supplier	Provider of information concerning works, goods or services.
Appointing Party	Client (project), asset owner/operator (asset)	Receiver of information concerning works, goods or services
Appointment	Contract, professional services agreement	Agreed instruction for the provision of information concerning works, goods or services
Delivery Team	Project Team	Lead appointed party and their appointed parties
Task Team	Make up the Delivery Team	Individuals assembled to perform a specific task

Table 4 – Nominated Competent Person(s) & Their Role Within the Delivery Team

Role	Discipline	Company	Name	Email
Lead Appointed Party	Lead Consultant	Dragon Design Ltd	Owen Towell	owen@dragondesign.com
Appointed Party	Architect	Bartizan Architecture Ltd	Mark Hughes	mark@bartizan.co.uk
Appointed Party	Structural Engineer	Broadstaff Structural Ltd	Thomas Preece	t.preece@broadstaff.com
Appointed Party	M&E Consultant	DB & Partners Ltd	David Williams	dave@dbpartners.com
Appointed Party	Quantity Surveyor	Quantum Ltd	Brian Thorne	brain@quantumqs.com
Task Team	BIM Manager	Dragon Design Ltd	Peter Langley	peter@dragondesign.com
Appointing Party	Project Manager	Swansea City and County Council	Michael Horwood	m.horwood@swansea.gov.uk

3.2 Survey Strategy

TBC upon receipt of EIR.

3.3 Existing Legacy Data Use

TBC upon receipt of EIR.

3.4 Approval of Information & Authorisation Process

Data to be reviewed and approved prior to construction. Information to be approved within 14 working days maximum.

4. Planning and documentation

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR. Considering the lack of an EIR, the following proposals from Dragon Design Ltd are provided (where possible).

4.1 Project Implementation Plan (PIP)

TBC upon receipt of EIR.

The Master information delivery plan (MIDP) will present the full degree of detail for the designs, which will be supported by Task information Delivery plans. Models will adhere to the approved level of detail listed within BS EN ISO 19650-2:2018.

4.1.1 Supplier Resource Summary

The below table summarizes the competency and capability of the Delivery Team.

Table 5 – Summary of competency and capability of delivery team.

Appointed Party	Discipline	Resource Numbers	Levels of Competence	Years of Experience	Names of Individuals
Dragon Design Ltd	Consultant Project Managing	TBC	BRE Bim Level 2 Competant RIBA, CAD/BIM, Specification Author	15	Owen Towell Brian Thorne
Bartizan Architecture Ltd	Architect	TBC	RIBA, CAD/BIM, Specification Author	10	Mark Hughes
Bartizan Architecture Ltd	Structural Engineer	TBC	MIStructE	8	Thomas Preece
DB & Partners Ltd	M&E Consultant	TBC	ECITB Trainee BEng (Hons) Mechanical and Electrical Engineering	18	David Williams

4.2 Collaboration Process

This section specifies the employer's collaboration requirements, such as how information will be managed and shared between parties, design detail / soft landing review workshops, and meeting frequency. (Scottish Futures Trust, 2020)

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR. Considering the lack of an EIR, the following proposals from Dragon Design Ltd are provided (where possible):

4.2.1 Common Data Environment

Using a cloud-based common data environment (CDE) – a Revitzo with Procore integration – information will be exchanged, revised, and managed between parties. Dragon Design Ltd are fluent in Revitzo, a cross-platform programme that combines BIM intelligence and transforms 2D CAD packages into interactive 3D environments with collaboration features. Data will be stored and shared via a cloud based Procore plug-in that will allow all parties to view data even when they are not connected to the internet.

Table 6 – Sharing Stages of the Common Data Environment

Stage	Description
Work In Progress (WIP)	Information that is currently being worked on but has not yet been published or approved.
Shared	Information has been reviewed and approved and is ready to be shared with the delivery team.
Published	Information is reviewed and authorized to proceed into a more complete design.
Archive	An information audit trail that follows a project's lifecycle.

4.2.2 Assumed Project Processes

Table 7 – Sharing Stages of the Common Data Environment

Appointed Party	Solution	Network	Database	File Based	Comments
Dragon Design Ltd	Revitzo	Revitzo / Procore	Model	.RVT	Clash detection
Bartizan Architecture Ltd	Revit	Revitzo / Procore	Model	.RVT	N/A
Bartizan Architecture Ltd	Revit	Revitzo / Procore	Model	.RVT	N/A
DB & Partners Ltd	AutoCAD	Revitzo / Procore	Model	.DWG	N/A

4.2.3 Frequency of Meetings

TBC upon receipt of EIR.

4.2.4 Details of Design / Soft Landings

TBC upon receipt of EIR. Recommended early client involvement.

4.3 Co-ordination & Clash Detection

Clause 5.1.2 of BS EN ISO 19650-2:2018 requires this in response to the EIR. Due to the lack of an EIR, the following proposals from Dragon Design Ltd are provided (where possible).

4.3.1 Clash Detection, Avoidance, Reporting & Resolution

Clashes will be detected and therefore avoided by using Revizto+. Revizto+ has clash detection which is fully based on 'search sets' - for either models or specific data within models. Because Revizto is a collaborative environment, appointed parties can use it simultaneously to conduct clash detections and review, report and resolve their findings.

Exact method TBA once EIR is available.

4.3.2 Requests for Information & Technical Query Workflows

TBC upon receipt of EIR.

4.3.3 Communication Strategy for Multi-disciplinary Reviews

TBC upon receipt of EIR.

4.4 Matrix of Responsibilities

TBC upon receipt of EIR.

In BS EN ISO 19650-2:2018, there are seven levels of detail defined, which do not reflect specific modelling guidelines for any software, but rather a generic definition of model detail (graphical), how individual objects display themselves, and the level of information required in response to the EIR.

Table 8 – Example of basic Matrix of Responsibilities

Task	Client	Architect	Structural Engineer	Mechanical Engineer	LOI	LOD
TASK 1	C	R	I	I	TBC	TBC
TASK 1	I	I	A/R	I	TBC	TBC
TASK 1	I	I	I	A	TBC	TBC
TASK 1	I	C	I	R	TBC	TBC
TASK 1	I	C	I	R	TBC	TBC
TASK 1	A	R	I	I	TBC	TBC

KEY:

R – Responsible for undertaking activity

A – Accountable for activity completion

C – Consulted during activity

I – Informed following activity completion

4.5 Task Information Delivery Plan (TIDP)

TBC upon receipt of EIR.

A task information delivery plan (TIDP) for each task within the project must be produced in an acceptable format to maintain consistency with the format required for the master information delivery plan. Once all team members have completed their TIDPs, they should be published in the appendix to this document and on the project extranet.

4.6 Master Information Delivery Plan (MIDP)

TBC upon receipt of EIR.

Individual task information delivery plans will be combined to create the master information delivery plan (MIDP) (TIDPs). All parties will need to prepare and agree on a more complete, coordinated MIDP. The MIDP should be published as a project plan in the appendix to this document and on the project extranet once it has been finished.

5. Standard Method and Procedure

5.1 Volume Strategy

TBC upon receipt of EIR.

The lead designer is responsible for subdividing sections inside projects into distinct disciplines in which they carry out their system models.

5.2 Origin & Orientation

NB: determined by the project's location and its relationship to other global or local grids.

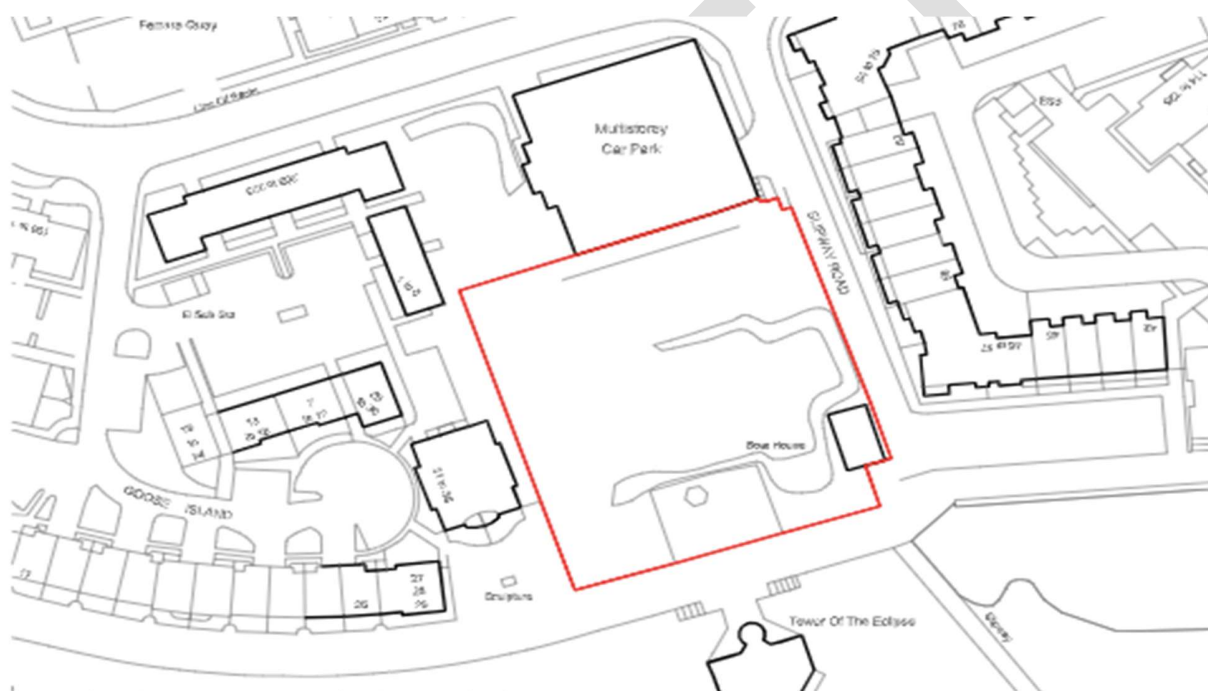


Fig.1 – Proposed Site Plan

Table 9 - Sharing Stages of the Common Data Environment

Point	Grid Reference (NGR)	Easting (X)	Northing (Y)	Latitude / Longitude
Bottom Left	SS6597692364	265976	192364	51°36'50.8"N 3°56'13.5"W
Bottom Right	SS6602492382	266024	192382	51°36'51.4"N 3°56'11.0"W
Top Left	SS6595892417	265958	192417	51°36'52.5"N 3°56'14.5"W

5.3 File Naming Convention

BS EN ISO 19650-1:2018 will be used to establish the filenames. All relevant parties will be able to save and access files, as well as have immediate access to and retrieval of saved data.

Table 10 - Example of file naming convention for this document

Project code	Originator code	Functional Breakdown	Spatial Breakdown	Form	Discipline	Number	Description	Status	Revision
5010	DDLTD	XX	XX	T	Z	0001	Post BEP	S0	P01

Filename for the above: 5010-DDLTD-XX-XX-T-Z-0001-POST_BEP-S0-P01

5.3.1 Project Code

A two-to-six-digit company project number — a single identification for all projects that is distinguishable from any one organization's internal project number.

5.3.2 Originator Codes

A unique identifier that represents the company/organisation that developed and produced the data. (3–6 characters)

5.3.3 Functional Breakdown

A more complicated project may require the division of numerous zones. Prior to the start of the project, the specific zone plan must be laid out in the EIR and agreed upon. (1–2 Characters)

Table 11 - Example of functional breakdown code to be used.

Code	Description
XX	No level

5.3.4 Spatial Breakdown

A breakdown of the levels to which the data refers to. (2 characters)

Table 12 - Example of spatial breakdown code to be used.

Code	Description
ZZ	Multi-level
XX	No level
00	Ground floor
01	First floor
M1	Mezzanine 1
M2	Mezzanine 2
B	Basement (all levels below ground floor prefix)

5010-DDLTD-XX-XX-T-Z-0001-POST_BEP-S0

BEP Plan © Dragon Design Ltd

5.3.5 Form

A breakdown of the type/form of data (2 characters)

Table 13 - Example of form code to be used.

Code	File Type
D	Drawing
G	Diagram
I	Image
L	List
M	Model
T	Textual
V	Video/Audio

5.3.6 Discipline

The originator's role in producing the data is defined by role codes. (1 character)

Table 14 - Example of discipline code to be used.

Code	Discipline
A	Architect/architectural
B	Building surveyor
C	Civil engineer
D	Demolition/dismantling
E	Electrical engineer
F	Facilities manager
G	Ground engineering
H	Highways & transport
I	Interior designer
K	Client
L	Landscape architect
M	Mechanical engineer
O	Other
P	Public health engineer
Q	Quantity surveyor
R	Project management
S	Structural engineer
T	Planner
W	Water engineering
X	Non discipline specific
Y	topographical
Z	Multi-discipline

5.3.7 Number

A four-digit identifier that indicates the number and grouping of data. This number is made up of a one-digit data group and a three-digit individual data number. (4 characters)

Table 15 -Example of document group numbers.

Number	Document Group
0	General
1	Substructure
2	Superstructure
3	Openings
4	Finishes
5	Piped & ducted services
6	Electrical
7	Fixtures & fittings (fixed)
8	Loose furniture
9	External works

5.3.8 Description

A description of the Document/Drawing/Model. (6–8 characters)

Table 16 -Example of description codes

Example	Description
GAPLAN	General arrangement plan
SITE	Site plan
SECTION	Section drawing

5.3.9 Status

This is a suitability code that defines and governs the stages of information and document generation during the BIM process. (2 characters)

Table 17 -Example of status codes as per ISO 19650-2 NA 4.2 Table NA.1

Code	Description	Revision
S0	Work in progress	Preliminary revision and version
S1	Suitable for co-ordination	Preliminary revision
S2	Suitable for information	Preliminary revision
S3	Suitable for review	Preliminary revision
S4	Suitable for stage approval	Preliminary revision
S5	Withdrawn	N/A
S6	Suitable for PIM authorisation	Preliminary revision
S7	Suitable for AIM authorisation	Preliminary revision
A1	Authorised and accepted	Contractual revision
B1	Partial sign-off (with comments)	Preliminary revision
CR	As constructed record document	Contractual revision

5.3.10 Revision

The document revision number. (1 character)

Table 18 -Example of revision codes to be used.

Example	Description
A	First revision
B	Second revision
C	Third revision

5.4 Drawing Sheet Template

TBA – In compliance with Employer Policy and BS 8888:2011 Technical Product Documentation (TPD) Specification for defining, specifying and graphically representing products & BS 8541 Library objects for architecture, engineering and construction.

5.5 Annotation, Dimension, Abbreviations & Symbols

To comply with BS 8888:2011 Technical Product Documentation (TPD) Specification for defining, specifying and graphically representing products & BS 8541 Library objects for architecture, engineering and construction.

6. IT Solutions

TBA following receipt of EIR – assumptions/proposals below in compliance with BS EN ISO 19650-2:2018.

6.1 Software Versions

TBA following receipt of EIR.

Table 19 – Proposed software.

Company	Database	Software	Version	Format
Dragon Design Ltd	Procore (cloud)	Revit	5.2	N/A
Bartizan Architecture Ltd	Procore (cloud)	Revit	2022.1.1	RVT
Broadstaff Structural Ltd	Procore (cloud)	Revit	2022.1.1	RVT
DB & Partners Ltd	Autodesk	AutoCAD	2020	DRG
Quantum Ltd	Procore (cloud)	Causeway	2.2.9	XML

6.2 Exchange Formats

TBA following receipt of EIR.

Table 20 – Proposed exchange formats.

Data Type	RVT	DRG	PDF	XML	DOC
Spreadsheets			X	X	
Text document			X		X
Drawings		X	X		
Models	X				

6.3 Process and Data Management Systems

TBA following receipt of EIR.

As per section 4.1

References

2013. CPix Post Contract BIM Execution Plan. 1st ed. [ebook] CPIx. Available at: <http://www.cpic.org.uk/wp-content/uploads/2013/06/cpix_post_contract_bim_execution_plan_bep_r1.0.pdf> [Accessed 15 March 2022].
- Autodesk.com. n.d. What Is BIM. [online] Available at: <<https://www.autodesk.com/industry/aec/bim>> [Accessed 6 March 2022].
- Bimportal.scottishfuturestrust.org.uk.2020. Create the Employers Information Requirements. [online] Available at: <<https://bimportal.scottishfuturestrust.org.uk/level2/stage/2/task/8/create-the-employers-information-requirements>> [Accessed 5 March 2022].
- BSI, 2018. ISO 19650-1:2018 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 1: Concepts and principles. 1st ed. London: British Standards Institution.
- BSI, 2018. ISO 19650-2:2018 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 2: Delivery phase of the assets. 1st ed. London: British Standards Institution.
- CAD Room, T., n.d. BIM Compliance: Are You Ready for BIM Level 2. [online] The CAD Room. Available at: <<https://www.thecadroom.com/bim-compliance-ready-bim-level-2/>> [Accessed 15 March 2022].
- McPartland, R., McPartland, R. and Sharman, J., 2016. What is the Common Data Environment (CDE)?. [online] NBS. Available at: <<https://www.thenbs.com/knowledge/what-is-the-common-data-environment-cde>> [Accessed 9 March 2022].
- United-bim.com. 2019. BIM Maturity Levels Explained. [online] Available at: <<https://www.united-bim.com/bim-maturity-levels-explained-level-0-1-2-3/>> [Accessed 13 March 2022].
- Voditel, V., 2020. The Top 5 Common Data Environments (CDE) for BIM. [online] planBIM. Available at: <<https://www.planbim.io/blog/2020/04/07/the-top-5-common-data-environments-cde-for-bim/>> [Accessed 6 March 2022].
- Whyte, J., 2019. BIM Certification Overview. [online] Cita.ie. Available at: <<https://www.cita.ie/wp-content/uploads/2019/06/3.-John-Whyte-BIM-Certification-Overview-June-2019-converted.pdf>> [Accessed 14 March 2022].

Bibliography

- AEC Magazine. n.d. Revizto clash detection added to BIM collaboration platform. [online] Available at: <<https://aecmag.com/news/revizto-clash-detection-added-to-bim-collaboration-platform/#:~:text=%E2%80%99Revizto%2B%20clash%20detection%20is%20built,results%20at%20the%20same%20time.%E2%80%9D>> [Accessed 14 March 2022].
- Integratedprojectdesign.com. 2019. Volume strategy – Digital Construction. [online] Available at: <[https://integratedprojectdesign.com/ddd/volume-strategy/#:~:text=a%20term%20defined%20by%20PAS,ductwork%2C%20electrical%2C%20etc\).>](https://integratedprojectdesign.com/ddd/volume-strategy/#:~:text=a%20term%20defined%20by%20PAS,ductwork%2C%20electrical%2C%20etc).>)> [Accessed 15 March 2022].
- Revizto.com. 2021. CDE Documents Overview. [online] Available at: <<https://help.revizto.com/hc/en-us/articles/4415825137679-CDE-documents-overview>> [Accessed 18 March 2022].
- Ukbimframework.org. n.d. Information Delivery Planning –Edition 1. [online] Available at: <https://ukbimframework.org/wp-content/uploads/2020/09/Guidance-Part-F_About-information-delivery-planning_Edition-1.pdf> [Accessed 16 March 2022].