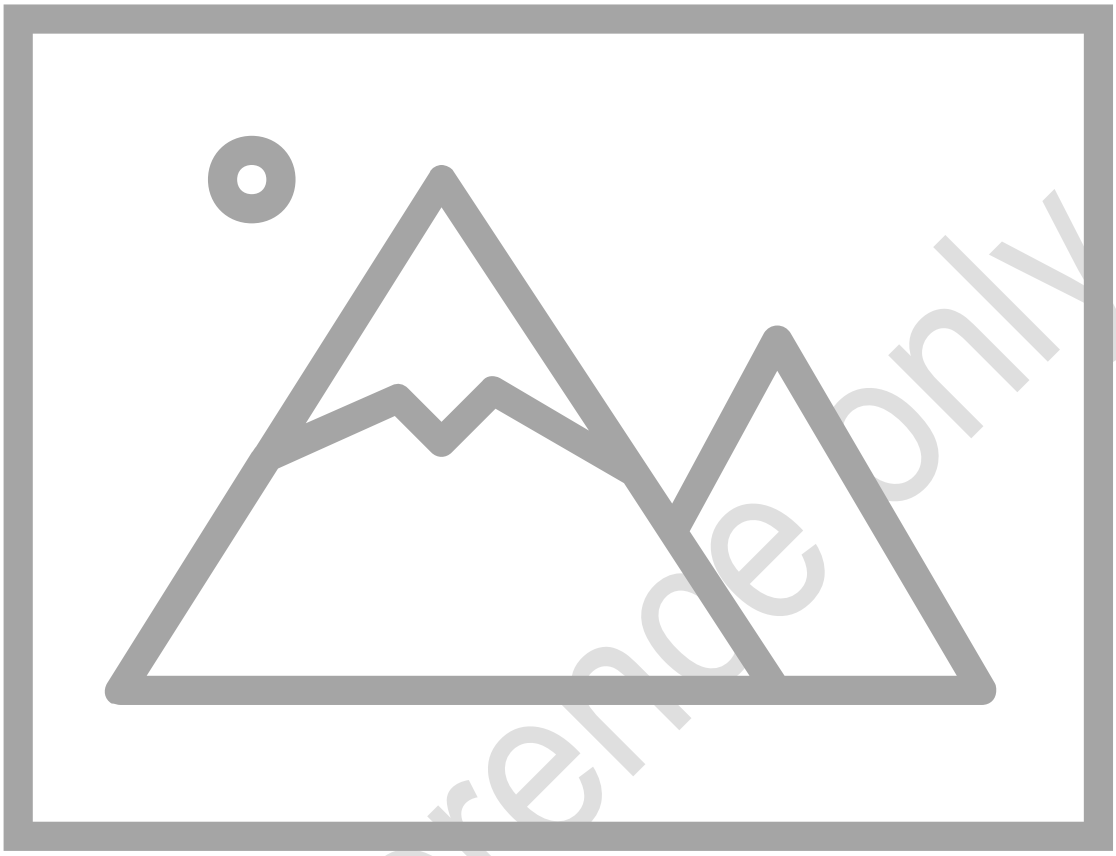

BIM Execution Plan
Date

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Contents
BIM Execution Plan

Version	Date of Issue	Brief Description	Authored by	Checked by
P01	TBC	Initial issue	Melanie Robinson (BIM Academy)	

Detailed Contents

1.0
BIM Procurement and Employer Engagement

1.1
Overview

Building Information Modelling (BIM) has been identified as a fundamental process for ensuring efficiency, quality, and certainty in the delivery of this project. This BIM Execution Plan (BEP) and its associated documents and references represents the key unified approach and shall clearly describe the agreed objectives for responsibility, timely delivery, exchange, re-use, and final handover of information and shall be agreed with the Authority prior to BIM implementation.

The BEP is a key governance document for information management on this project and may be referenced in contractual agreements regarding information deliverables and responsibilities.

1.2
Project Information

The following table defines information about the project.

Table 1 – Project Information

Project Name	
Project Address	
Project Code	
Project Description	
Contract Type	
Correspondence Address	
Plan of Works	
Proposed Stage Completion Date	
Proposed Site Works Commencement Date	
Proposed Works Completion Date	

1.3
Roles and Contact Information
The following table defines key project roles and contacts. A complete list of project stakeholders is available in the Project Directory.

Table 2 – Key BIM Contacts

Role	Organisation	Name	Email
Client (Authority) Team			
Client (Authority)			
Authority's BIM Consultant			
Built Asset Information Manager			
Government Soft Landings Champion			
[Insert additional rows if required]			
Delivery Team			
Project Manager			
BIM Lead			
Information/BIM Manager			
Design Lead			
Landscape			
Contractor Lead			
Structural, Civil & Highways Engineer			
MEP Engineer			
Cost Management			
[Insert additional rows if required]			

1.4
Delivery Team Organizational Structure

This section sets out the organizational structure of the Delivery Team, including the commercial relationships and the split of the Delivery Team into individual Task Teams.

A placeholder for an image of the organogram has been provided below.

Figure 1 – [PLACEHOLDER] Project Team Organogram

2.0
Commercial

This section outlines the commercial aims and objectives of the project.

2.1
Key Performance Indicators

Below is the list of Key Performance Indicators (KPIs) which will be used to measure and evaluate the successful use of BIM on the project.

This section should respond to the KPIs established by the Authority, such as identifying how the KPIs are to be measured. This could be presented in a table, such as the one set out below. Note that the table is for illustrative purposes only and should be customised to suit project requirements.

KPI	Metric
To reduce the number of design clashes during design development.	Tracking of issues resolved/unresolved through regular clash detection sessions.
To reduce the quantity of resolvable native model warnings in model files.	Tracking of resolved/unresolved native model warnings via regular model audits.
To achieve compliance with model, object, level, view, and sheet naming standards.	Tracking compliance scores via regular model audits.
To achieve compliance with the file naming standards.	Tracking compliance scores via regular model audits.
To increase the accuracy of as built information.	Tracking scores via regular data audits. Comparing and recording deviations between the as-designed and as-built information models.
[KPI]	[Metric]

If no KPIs are provided by the Authority, the Lead Appointed Party shall develop their own.

2.2
BIM Vision and Objectives

Below is a list of BIM objectives identified by the Project Delivery Team. These objectives have been developed to identify how BIM will assist the Project Delivery Team in delivering their contractual obligations. This BIM Execution Plan addresses the BIM objectives and sets out how these will be met.

The non-exhaustive list below is for illustrative purposes only and should be customised to suit project requirements.

- To efficiently deliver the Project to ISO 19650 working in line with industry best practice to meet the agreed project scope.
- Better informed client decision making, earlier and more efficient reporting of developing design
- Improved multidisciplinary design coordination and de-risking costs during construction
- Visual communication and optimisation of construction phasing and sequencing
- Improved cost certainty and predictability
- Improved accuracy and consistency of design information
- Models and information which can be used to support operation and maintenance of the facility beyond practical completion
- Facilitate stakeholder engagement through efficient visual communication of the design intent.
- Insert more lines if required.

2.3
BIM Uses

The following table sets out the BIM uses to be applied on the project as a minimum.

The below table is illustrative and should respond, and potentially add to, the uses specified by the Authority.

Table 3 – BIM Uses

BIM Use		Description
Forward Planning	Existing conditions modelling	The 3D modelling of the existing conditions for a site, facilities on a site, or a specific area within a facility, in this case using laser scanning.
	Visualization and communication	The creation of visualizations using the models to support marketing or user engagement. This may include walkthroughs, model renders, enhanced visuals, interactive models for smartphones etc. Any design reviews with the project team or user consultations should use the model as support.
Management	Model-based cost management (5D)	The accurate quantity take-offs and cost plan creation throughout the lifecycle of a project using the 3D models, including rapid demonstrations of the cost impact of changes.
	Model-based construction scheduling (4D)	The 3D sequencing of project phases and/or detailed construction sequencing, including simulated site conditions during construction
	Construction system design	The design and analysis of construction systems, such as formwork, glazing and scaffolding.
Design Authoring	3D Coordination and clash detection	The identification, monitoring and removal of any hard or soft clashes affecting the design intent or model quality through the federation of the project models.
	Assurance and Data Validation	The rule-based analysis of models to determine deficiencies in model authoring and design.
	Data Classification	The use of a standardized data structure, taxonomy and asset naming across all assets and projects.
	Design Authoring	The modelling of the design using information loaded objects in such a quality as to all for other BIM uses to be derived from the models. This includes authoring of bespoke objects.
	Drawing Generation	2D graphical information is extracted from the model to communicate design information and meet contractual obligations
	Design and Construction Reviews	The 3D view and review of the models to provide feedbacks to validate multiple design or construction aspects.
	Spatial Planning and Optimization	The assessment of design performance regarding spatial requirements, including optimum ratios against standard concept model
Analysis	Energy / Building Analysis	The analysis of the asset's energy performance using intelligent model analysis software.

	Sustainability Evaluation	The use the model to support project assessment for the environmental statement, LEED and other applicable sustainable goals set.
	Structural Analysis	The analysis and virtual testing of the asset's structural performance using intelligent model analysis software.
	Evacuation Analysis	The use of 3D modelling to simulate crowd movement in evacuation situates and normal operations.
Construction	Digital Fabrication	The use of modelled components for fabrication, especially in case of pre-fabrication.
	Field Management / Tracking	The utilization of field BIM software during construction and handover on site to manage, track, task and report safety, commissioning and handover documents which are linked to the BIM
	Laser Scanning	The utilization of 3D laser scanning technology to produce an accurate point cloud of the site and/or assets.
	Record Modelling	The accurate modelling of the physical conditions, environment, and assets of a facility.
Operation & Maintenance	Facilities and Asset Management	The operation and maintenance of the facilities using the models and their information.
	Asset Registry	Asset information collected through BIM to be transferred to Computer Maintenance Management System (Maximo) for Operation and Maintenance.
	Preventative Maintenance	The linking of BIM information, such as Operation and Maintenance manuals, to systems which support operation and maintenance.

2.4
Applicable Standards

The Delivery Team will follow recognised industry standards and best practice throughout the design, construction, and handover stages. The below table outline the core documents and standards to be utilised on this project.

Table 4 – Industry Information Management Standards

Document / Standard	Description	
EN 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
EN ISO 19650-2:2018		Part 2: Delivery phase of the assets
EN ISO 19650-3:2020		Part 3: Operational phase of the assets
EN ISO 19650-5:2020		Part 5: Security-minded approach to information management
BS 1192-4:2014	Collaborative production of information	Part 4: Fulfilling employer's information exchange requirements using COBie – Code of practice
PAS 1192-6:2018	Specification for collaborative sharing and use of structured Health and Safety information using BIM	
BS 8536-1:2015	Briefing for design and construction	Code of practice for facilities management (Buildings infrastructure)
BS 8541	Library objects for architecture, engineering and construction	Parts 1 to 6
Information Protocol to support BS EN ISO 19650-2	This is a supplementary legal agreement that is incorporated into professional services appointments and construction contracts by means of a simple amendment.	
Uniclass2015	The aim for this is to have a fully developed structured, indexed and standardised information classification system for all of the industry to easily access in a common format which integrates with the BIM toolkit.	
[Insert more lines if required]		

Table 5 – Project Documents and Shared Resources

Document / Standard	
[Document Name]	Exchange Information Requirements
[Document Name]	Asset Information Requirements
[Document Name]	Project's Information Standard
[Document Name]	Project's Information Production Methods and Procedures
[Insert more lines if required]	

3.0
Information Delivery Strategy

4.1
Information Exchange Points
The table below sets out the required key information exchanges and their purpose.

Table 6 – Information Exchange Points

Key Decision Point	KD1	KD2	KD3	KD4	KD5	KD6	KD7	KD[…]
	E.g., 30%	E.g., 50%	E.g., 70%		E.g., 90%	E.g., 100%	E.g., Record	
Exchange Purpose	End of stage approval	End of stage approval	Validation of data / mid-stage approval	End of stage approval	End of stage approval	End of stage approval	Final validation of data	
Design Submittal Date								
Exchange Delivery Date								
[Insert more lines if required]								

Where information exchanges are required at the end of the design stage, information shall be submitted [4 weeks] prior to end of stage by each organisation that forms the Delivery Team for review and audit by [the Information Manager] in accordance with the compliance plan described in Section X.

Information shall be exchanged via the project CDE. Project specific dates will be agreed within BIM meetings and stated in the table above once set and agreed.

Models shall be issued within [three working days] of an request for information (RFI) requesting this information, where appropriate.

3.2
Federation Strategy
The below wording represents best practice and should be adapted accordingly.

Model files shall be reviewed in terms of performance upon reaching a file size of [100mb] and limited to a maximum size of [250mb]. Model files shall contain elements from only one design discipline i.e., structural elements shall be held in a separate sub model from architectural elements.

Only one building shall be contained per model file. Where the building layout allows the model to be separated into volumes either to minimise the size of the models or to manage the use or ownership of each zone, a volume strategy will be developed and included within this BIM execution plan.

The use of Revit Worksets shall be adopted to aid a more efficient and effective use of the model. All worksets will be named using the following conventions, with fields separated with '-'.

Table 7 - Worksets

Field	#	Necessity	Example values (description)
Zone	01	Required	00 (All Zones)
Level	02	Required	ZZ (Multiple Levels)
Classification	03	Optional	25_10_30 (NBS Create Section Reference)
Description	04	Required	Framed_Partition_Systems (NBS Create Section Name)

3.3 Volume Strategy

The below wording represents best practice and should be adapted accordingly. If a volume strategy is not in use, delete this section from the document.

The volume strategy is to be used by the Delivery Team to ensure models achieve the stated maximum file size. Where necessary, models will be segregated into the below volumes. Drawings and design information will reference and be named in line with the agreed strategy in Section X and Appendix X.

Table 8 – Volume Strategy

Volume	Volume Description

3.4 Information Container Breakdown Structure

This section sets out the organizational structure of the Delivery Team, including the commercial relationships and the split of the Delivery Team into individual Task Teams.

Figure 2 – [PLACEHOLDER] Information Container Breakdown Structure

3.5
High-Level Responsibility Matrix

The table below sets out the high-level responsibilities in accordance with the information container breakdown structure.

This matrix will list all appropriate elements within the information model and stipulate a responsible party and the deliverable required for each element.

Note that the 'Task' column should be populated based on the information container breakdown structure and that the 'Responsible Party' column should be populated based on the Delivery Team organization structure.

Table 9 – High-Level Responsibility Matrix

Task		Responsible Party
Architectural	Architectural information	Architectural Task Team
MEP	Mechanical information	MEP Task Team
	Electrical information	MEP Task Team
	Plumbing information	MEP Task Team
Structural	Primary structure information	Steelwork Design Task Team
	Secondary structure information	Steelwork Fabrication Task Team

3.6
Detailed Responsibility Matrix

A detailed responsibility matrix, outlining what information is to be produced, when the information is to be exchanged with whom, and who is responsible for producing the information, is provided in Appendix X.

This could take the structure of a Model Production and Delivery Table (i.e., broken down into individual modelled elements), and should refer to the Task Teams within the Delivery Team

organization structure as the responsble parties and the information exchange points as the stage for exchange.

3.7
Information Delivery Plans
Task Information Delivery Plans have been consolidated to form the Master Information Delivery Plan in Appendix X.

4.0
Information Standard

This section outlines the additions and/or amendments to the project's information standard as set out in [document reference].

The following sections are not exhaustive and may be expanded according to the specific information requirements of individual projects. Sections may also be removed if they are not necessary for the current appointment. If no additions and/or amendments are proposed, then this chapter can be omitted entirely.

Upon agreement, any additions and/or amendments will be intergrated into the project-wide information standard.

4.1
Information Naming Convention

The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

All files will follow the naming convention below, in line with the UK National Annex to ISO 19650-2:2018. Fields should be separated by a hyphen (Hyphen-Minus Unicode Reference U+002D). No spaces or other punctuation should be used.

Table 10 – Information Naming Convention

Field:	Project	Originator	Functional	Spatial	Form	Discipline	Number
Example:	TBC	TBC	TBC	TBC	TBC	TBC	TBC

Where;

Table 11 – Naming Field Descriptors

Field:	Descriptor
Project	Single common project identifier.
Originator	Unique identifier for each organization.
Functional	Unique identifier for a functional aspect of the information container breakdown structure (e.g., system, work package, etc.).
Spatial	Unique identifier for each spatial subdivision (e.g., volume, level, grid location, etc.).
Type	Unique identifier for each type of information.
Role	Unique identifier for each role.
Number	Sequential number when it is one of a series and not distinguished by any other of the fields.

The full information naming convention is provided in Appendix X [which provides the nomenclature defined for this project, in addition to the standard codes prescribed by the National Annex]. The convention will be updated as required, e.g., when new organizations join the project or additional volumes are defined.

If preferred, the list of codes for each field can be provided in individual tables within this section.

Drawings shall clearly indicate in the title block whether they have been extracted from the model files and if they have, drawings should clearly indicate, in the title block, the model files (by file name/no) they have been extracted from. Federated models or visualisations shall clearly confirm the model/drawing files (by file name/no) they have been federated from.

4.2
Information Classification

If the Authority only requires the minimum requirements in accordance with ISO 19650, or does not specify any requirements relating to information classification, the following wording shall be used:

All information deliverables and assets shall be classified according to a specified classification system which is compliant with ISO 12006-2. As a minimum, the Uniclass 2015 classification shall be used as metadata in accordance with the UK National Annex to BS EN ISO 19650-2:2018.

The Uniclass 2015 Project Management classification codes shall be assigned to information containers via metadata assignment within the CDE, as outlined in the Master Information Delivery Plans provided in Appendix X.

Model objects shall be classified using Uniclass 2015 Product codes within the model object attribute data.

The Lead Appointed Party shall review the use of any specified system with respect to the delivery requirements and specify any amendments or additions.

4.3
Level of Information Need

The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

The level of information need is used to determine both the level of geometry detail (LOD), and level of associated information (LOI) for any given model element at an agreed project work stage. Defining the level of information need informs Task Teams of the degree of information reliability when using the model.

The level of information need for the project will be based on [specify method here]. The table below outlines how the levels of definition and information develop across the project stages at a high-level. These are provided in further detail within the detailed Responsibility Matrix and the Master Information Delivery Plan provided in Appendix X and Appendix X respectively.

The table below is for illustrative purposes only using the NBS Toolkit LOD/LOI definition structure and should be customised to suit project requirements. This shall include any formats specified by the Authority. If a deviation is made from any requirements specified by the Authority, the Lead Appointed Party shall set out their reasoning in this BIM Execution Plan.

Table 12 – Level of Information Need by Stage

System	Stage 1		Stage 2		Stage 3		Stage 4		Stage 5		Stage […]	
	LoD	LoI	LoD	LoI	LoD	LoI	LoD	LoI	LoD	LoI	LoD	LoI

4.4
Delivery Strategy for Asset Information
An Asset Information Model (AIM) will be delivered at the final information exchange point (see Section 2.1). The information exchange format and requirements for the AIM are prescribed in the Asset Information Requirements (AIR) document [cross-reference].

The Specific Structured Data requirements (COBie) and Maintainable Asset list are provided in Appendix [cross-reference] and Appendix [cross-reference] respectively. COBie data shall be embedded within the native models and exported, verified, and validated in accordance with these requirements.

The proposed methodology and process for the best delivery of the Authority's required asset information should set out here and in the associated Master Information Delivery Plan post-appointment.

4.5
Health & Safety and Construction (Design and Management)
The below wording represents best practice and should be adapted accordingly:

Models will be regularly reviewed by the Principal Designer, who will highlight any potential H&S issues. Disciplines should utilise models to highlight and identify where potential hazards, health & safety, and CDM risks are.

The delivery team are expected to demonstrate an innovative approach to H&S and CDM particularly in the way that BIM can reduce H&S risks through early identification and mitigation, e.g.:

A Revit family (HazardMarker.rfa) has been created and should be used to indicate areas of the model/building where risks lie. The Principal Designer will federate models and use the family to manage, track and coordinate health and safety / CDM. The Revit family contains a set of in-built parameters that should be populated to keep track of risks within the model.

4.6
Project Coordinates and Model Setup
The below wording represents best practice and should be adapted accordingly:

All model information will adopt the same coordinate system to ensure efficient collaborative working and must always be adhered to throughout the project lifecycle. Maintaining a shared coordinate system amongst all project team members is an essential part of delivering a BIM-enabled project.

The below table defines the shared site model coordinates to be used for this project. Project units shall be metric and set to a minimum of [2] decimal places [except for infrastructure who use metre to [3] decimal places].

If coordinates are provided by the Authority, the table should be populated with the relevant information as provided. Any additional coordinates shall be specified here also.

The coordinate system to be used on the project is [specify coordinate system].

All shared model information will use the following project base point [A], to be agreed by all appointed parties via the BIM Execution Plan, with the correct corresponding world coordinates and ensure measurement units are in millimetres.

Base Point	Coordinate Axis	Coordinate Value
[A]	Easting (m)	[Value]
	Northing (m)	[Value]
	Elevation / Datum (m)	[Value]
	Angle to True North	[Value]

Project Base Points will be included relative to the shared site model.

5.0
Information Production Methods and Procedures

This section outlines the additions and/or amendments to the project's information methods and procedures as set out in [document reference].

The following sections are not exhaustive and may be expanded according to the specific information requirements of individual projects. Sections may also be removed if they are not necessary for the current appointment

5.1
Survey Information

The following existing asset information has been established as reference information (see Section [cross-reference]) and stored within the [state location on CDE] in the Common Data Environment. The table below sets out which information is provided, the delivery formats, and any additional, relevant information for the Delivery Team to consider.

The table below is for illustrative purposes only and should be customised to suit project requirements.

Table 13 – Existing Asset Information

Existing Asset Information	Delivery Format(s)	Survey Origin (if applicable)	Comments
E.g. Point Cloud of site	*E.g. PCD*		
E.g. Topographical Survey			
[Insert more lines if required]			

5.2
Information Exchange Formats

For each required information exchange, information will be required in the following formats derived from the same dataset.

The table below is for illustrative purposes only and should be customised to suit project requirements. This shall include any formats specified by the Authority. If a deviation is made from any requirements specified by the Authority, the Lead Appointed Party shall set out their reasoning in this BIM Execution Plan. If IFC is specified, a guide to export settings should be provided as an Appendix for consistency in exports across the Delivery Team.

Table 14 – Information Exchange File Formats

Information Exchange Type	Required File Format	Version (if applicable)
2D Geometrical Data Exchange	*e.g. .PDF*	
	e.g. .DWG	
	[Format]	[Version]
3D Geometrical Data Exchange	*e.g., native model (.RVT)*	*e.g., Revit 2021*
	e.g., IFC	*e.g. IFC 2x3*

Non-Geometrical Data Exchange	*e.g. IFC2x3, or TBC by Lead Appointed Party*	
Documentation	*e.g. PDF, DOC, or TBC by Lead Appointed Party*	
[Insert more lines if required]	TBC	

If specific file formats are to be applied to a specific information exchange purpose, this should be set out here, as demonstrated in the illustrative table below.

The table below lists the file formats to be used for each information exchange purpose. Documentation shall be provided as required.

Table 15 – Information Exchange Requirements

Information Exchange Purpose	File Format				
	Native	IFC	NWC	DWFX	XLSX
Existing Conditions Model	•	•			
Fortnightly Model Sharing	•		•		
Monthly Upload	•	•	•		
Design Freeze for Costing				•	
Data Drop	•	•		•	•
[Insert more lines if required]					

The following hierarchy is to be applied to the formats specified in this section:

Hierarchy level	File Format
Primary	IFC, XLSX (COBie)
Secondary	Native models from BIM authoring tools (e.g., RVT, PLN)
Tertiary	DWG, PDF,

This hierarchy sets out the priority for compliance plan and quality assurance of the digital model. Therefore, compliance plan and quality assurance of the information and structures enabling the uses listed in the BIM Uses table, shall be carried out on primary formats.

5.3 Modelling Methodologies

The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

Before sharing models, BIM authors are responsible for the following:

- All linked files and links to centralised information sources or databases are removed
- All extraneous drawings sheets (i.e. those deemed to not be a deliverable) have been removed from the BIM model. Any drawings that remain in the shared models will be treated as S0 – Work In Progress until formally issued.

- All BIM models contained within the BIM model file, but not present in the design, have been removed
- File format and naming conventions conform to the BEP and remain constant for the life span of the project.
- Data segregation conforms to project requirements as detailed in the BEP.
- 3D model and 2D drawings are up to date and the 2D information has been derived from the 3D model
- All BIM objects present in the design have been made visible in the BIM Model. A 3D Export view should be created in the native model and used for model sharing.
- All ownership of any shared work sets has been relinquished
- All BIM models are using the shared coordinate system defined at the outset of the project and as provided in the site set-up model.

5.4 Object Identification

The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

Objects should be named in line with BS 8541-1:2012 (Library objects for architecture, engineering and construction. Part 1: Identification and classification).

Model objects shall use the naming convention as defined below and be classified using Uniclass 2015 within the model object attribute data.

Fields should be separated by an underscore and use CamelCase. No spaces or other punctuation should be used.

Example: [Originator]_ExternalDoubleDoor_1810x900

Source	Type	Subtype/ Product (optional)
[Originator]	ExternalDoubleDoor	1810x900

5.5 Common Data Environment (CDE)

The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

All information will be uploaded and logged on the common data environment (CDE) in line with [CDE Strategy reference]. This will ensure consistent and accessible information is provided to the project team and accountability can be determined by the Lead Appointed Party

Table 16 – Project Common Data Environment Details

CDE name and version	
Intended Use	
Date of Implementation	
URL	
Administrator name	

Email address	

Within the CDE, the Delivery Team, including their Appointed Parties, are responsible for the following:

- Uploading and issuing all relevant information via the CDE;
- Safeguarding a copy of the information on a secure server within their own organization;
- Downloading relevant files from the CDE;
- Using file naming conventions as detailed within this document and the BIM Execution Plan;
- Uploading the information in file formats are described in this document and the BIM Execution Plan;
- Ensuring that none of the uploaded files are corrupted or contain any viruses or malware;
- Ensure that the last valid revision of each file is uploaded; and,
- Report to the Delivery Team's CDE manager / coordinator any issues encountered in the form or content of files within the CDE.

5.6
Coordination and Clash Detection

The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

The coordination and clash detection process is as follows.

- [Responsible Party] will host [monthly] coordination / BIM review meetings with the Delivery Team, to facilitate continuous coordination.
- The latest models shall be made available in the information exchange formats specified in Section X via the CDE [1 week] prior to the [monthly] coordination meeting, for the purpose of coordination checks.
- [Responsible Party] will run a clash detection exercise using [software version].
- [Responsible Party] will share coordination and clash detection issues via [specify method for sharing issues].
- The relevant parties will be assigned to individual issues. Issues and errors will be assigned a work stage, date found, and action date. The total number of issues per discipline and work stage will be monitored throughout the project.

The table below sets out the procedure for coordination and clash detection on the project.

Table 17 – Coordination and Clash Detection Process

	Monday	Tuesday	Wednesday	Thursday	Friday
1 week prior to BIM meeting			[Format] to be uploaded to the CDE, with native model format as linked file.	Coordination and clash detection carried out by [Responsible Party].	Coordination and clash detection carried out by [Responsible Party].

Week of BIM meeting	Coordination report prepared by [Responsible Party].	Coordination report issued to [agreed system].	BIM review meeting.	Design team to review report and resolve clashes/ coordinate models 1 week prior to the next BIM meeting, in line with the process defined in this table.

Rulesets and any further instructions or information should be provided in a coordination and clash detection protocol and appended to this document.

5.7
Security and Distribution of Information
The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

Unless agreed with Authority, all project information is to be treated as confidential. The Project Team should provide a protocol for uploading information to the CDE, which will be fully adopted by all parties as specified within Section X. This protocol shall include defined controls and access permissions to be set at both the role and folder level, and an outline of the roles and responsibilities pertaining to these requirements. The BIM Execution Plan shall also set out the process for monitoring, managing, and complying with these requirements.

All parties shall adhere to the security requirements defined in ISO 19650-5:2020 and are required to have appropriate back-up, recovery, firewall and anti-virus facilities and regimes in place within their own organization. These procedures must be taken to secure the data and meet any restraints imposed by Authority.

Project Stakeholders are responsible for their supply chain's adherence to this policy.

5.8
Compliance Plan
The below text has been provided as best practice but should be reviewed and adapted in line with the Authority's requirements.

[Responsible Party] will audit the integrity of the models regularly; the audit will be issued prior to, and be presented at, the monthly BIM meeting. [Tools] will be used to audit each discipline model and issues will be reported back to the Delivery Team in the form of a model audit document. This model audit document shall be reviewed by the relevant team members and updates shall be made to the native models as necessary.

Where a check fails, a score of zero will be given. Where a check passes, a score of one will be given. A summary of the failed checks will be provided as part of the model audit document for further information. The criteria used can be found in Appendix X of this document. Progress will be tracked monthly and reported back to the [Responsible Party].

COBie information shall be reviewed and audited in line with the requirements stipulated in Appendix X and Appendix X. An audit document will also be provided for review by the relevant team members. Progress will be tracked monthly and reported back to the [Responsible Party].

Once information has been submitted and in receipt, [Responsible Party] will conduct a data audit and provide a report highlighting errors within 7 working days. Following the issue of BIM Academy audit report, a period for updates and amendments by associated the Project Delivery Team members will follow, and subsequent information exchange will then be completed at the end of design stage. It is expected that issues and errors reported shall be addressed, in an order of priority, prior to each information exchange at end of stage and/ or prior to the next agreed audit date, and in context of the development of the overall project.

6.0
Resource Schedules

6.1
Software

The below take lists the BIM uses and software to be used for this project.

The table below is for illustrative purposes only and should be customised to suit project requirements, e.g., the BIM uses should reflect the BIM uses identified within the information requirements and be applicable for the Delivery Team for which this BEP represents. This section shall be informed by the capacity assessment. If extensive, it may be better to attach as an appendix.

Table 18 – Software Platforms

BIM Use	Project Stage			Software Platform	Version	No. Licences
Forward Planning						
Visualisation and Communication	•	•		TBC	TBC	TBC
Design Authoring						
3D Coordination and Clash Detection	•	•		TBC	TBC	TBC
Assurance and Data Validation	•	•		TBC	TBC	TBC
Data Classification	•	•	•	TBC	TBC	TBC
Design (BIM) Authoring - Building	•	•		TBC	TBC	TBC
Design (BIM) Authoring - Site				TBC	TBC	TBC
Design and Construction Reviews	•	•		TBC	TBC	TBC
Drawing Generation	•	•	•	TBC	TBC	TBC
Spatial Planning and Optimisation	•			TBC	TBC	TBC
Sustainability Evaluation	•			TBC	TBC	TBC
Construction						
Field Management Tracking		•		TBC	TBC	TBC
Record Modelling		•	•	TBC	TBC	TBC
Operations and Maintenance						
Asset Management			•	TBC	TBC	TBC
Planned Maintenance			•	TBC	TBC	TBC
[BIM Use Grouping]						
[BIM Use]						

6.2
Hardware

The below take lists the hardware to be used for this project.

The table below is for illustrative purposes only and should be customised to suit project requirements. This section shall be informed by the capacity assessment.

Note that an additional row should be inserted for each hardware type, as illustrated in the example below. If extensive, consider including as an Appendix instead.

Table 19 – Schedule of Hardware Capacity

Originator	Type	Key BIM Use(s)	Name	No.	Operating System	Specification
Originator 1	PCs					
	Laptops					
	Tablets					
	Mobile Devices					
Originator 2	PCs					
	Laptops					
[Originator]	[Type]					

6.3
Capability Assessment

The below table confirms the Delivery Team's understanding and acceptance to comply and perform in line with the stated capabilities.

The table below is for illustrative purposes only and should be customised to suit project requirements. This section shall be informed by the capability assessments.

Table 20 – Overview of Capability Assessments

Capability Criteria	[Originator]	[Originator]	[Originator]	[Originator]
Previous BIM project experience				
Adopt BIM protocols and procedures				
Implement internal QA processes				
Understanding of BIM Standards as stated in Section 3.5 of this document.				
Able to issue native BIM format files				
Able to comply with section 3.14 of this document (Security).				
Able to use appropriate BIM Software platforms and versions as stated in section 4.2 of this document.				
Able to provide training within the organisation if skills gap is identified.				

Appendix A
Abbreviations & Glossary

The below tables define commonly used acronyms, abbreviations, and terminology.

Table A.1 - Acronyms

Acronym	Meaning
AIM	Asset Information Model
BEP	BIM Execution Plan
BIM	Building Information Modelling
CAFM	Computer-Aided Facilities Management
CDE	Common Data Environment
CDM	Construction, Design and Management
EIR	Exchange Information Requirements
FM	Facilities Management
IFC	Industry Foundation Classes
LOD	Level of Definition
LOI	Level of Information
MIDP	Master Information Delivery Plan
MPDT	Model Production Delivery Table
PIM	Project Information Model
TBC	To Be Confirmed
TIDP	Task Information Delivery Plan
WIP	Work in Progress
	[Insert additional rows if required]

Table A.2 – Glossary of Terms

Term	Definition
4D	A 3D representation of an asset with the element of time included to enable simulations
5D	A 3D representation of an asset with the element of time and cost included/linked to enable simulations, commercial management and earned value tracking to take place
6D	A 3D representation of an asset which includes data which enables the efficient management, operation and maintenance of the completed asset
Asset Information Model (AIM)	information model used to manage, maintain and operate the asset
Attribute	A specification that defines a property of an object
BIM Model or BIM Model file	A 3D model file containing hierarchically defined objects to which data can be attributed
Building Information Modelling (BIM)	Process of designing, constructing, or operating a building or infrastructure asset using electronic object-oriented information
COBie (Construction to Operation Building information exchange)	Structured asset information for the commissioning, operation and maintenance of a project often in a neutral spread sheet format that will be used to supply data to the or operator to populate decision-

	making tools, facilities management and/or asset management systems
Common Data Environment (CDE)	Single source of information for any given project, used to collect, manage and disseminate all relevant approved project documents for multi-disciplinary teams in a managed process. This is commonly a cloud-based SaaS (Software as a Service) solution synchronised with party servers to host the PIM
Data	Information stored but not yet interpreted or analysed
Document	Information for use in the briefing, design, construction, operation, maintenance or decommissioning of a construction project, including but not limited to correspondence, drawings, schedules, specifications, calculations, spread sheets
Drawing	Static, printed, graphical representation of part or all of a project or asset
Exchange Information Requirements (EIR)	Pre-tender document setting out the information to be delivered, and the standards and processes to be adopted by the Project Stakeholders as part of the project delivery process
Exchange BIM model file	An open and neutral data format for BIM models
Federated BIM model file	A file combining all available latest BIM models into a single BIM model for reference
Graphical data	Data conveyed using shape and arrangement in space
Model Production Delivery Table (MPDT)	Identifies the LOD required for a specific BIM object at a given project work stage and the BIM author responsible for the object's inclusion
Native BIM model file	The primary data format used by the BIM model authoring tool to create BIM models
Object or BIM Object	A repository of information that holds data regarding 2D and 3D geometry description of the actual product or component
Pre-appointment BEP	The pre-appointment BEP is to demonstrate the Project Stakeholder's proposed approach, capability, capacity and competence. It is assessed prior to the appointment of any stakeholder
BEP	The BEP is the document defining standard methods and procedures adopted during the contract in order to meet the project objectives and requirements. It is utilised following the appointment of Project Stakeholders and in particular by the Contractor Lead
Project Information Model (PIM)	Information model developed during the design and construction phase of a project
Space	Represents an area or volume bounded within a BIM model which provides a certain function
Supplier Information Exchange	Structured collection of information at the end of a work stage with defined format and fidelity
Type	A grouping of BIM objects
Volume	Manageable spatial subdivision of a project. Defined by the Project Delivery Team as a subdivision of the overall project that allows more than one person to work on the project models simultaneously and consistent with the design process
Zone	A group of spaces, partial spaces or other zones

[Insert additional rows]

Appendix B
Information Naming Convention