Digital Practice Series: 2

Employer's Information Requirements

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Employer's Information Requirements

Landscape Institute DP2: 2017

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Note from the publisher

This publication has been adapted from the original to provide guidance to those responsible for the design and management of landscapes. It is not intended to be exhaustive or definitive and it will be necessary for users of the guidance given to exercise their own professional judgement when deciding whether to abide by or depart from it, particularly given that it is an adaptation.

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Foreword

This document is intended for Practices that create, complete and review employer's information requirements documents (EIRs). It is based on PAS 1192-2:2013, which provides specific guidance on the information management requirements of projects delivered using BIM. PAS 1192-2 is one of the documents included within the government mandate for the adoption of Level 2 BIM for central government procured contracts.

It is not intended to be an exhaustive or definitive document and it will be necessary for users of the guidance given to exercise their own professional judgement when deciding whether to abide by or depart from it, particularly as it has been developed as an adaptation of an original document.

The employer's information requirements document is created at the beginning of the capital phase of a project, and sets out the client requirements in detail, supplemented by questions for potential members of the supply team to respond to in the form of a BIM Execution Plan (BEP).

For authors of employer's information requirements documents, it is important to understand what the employer organisation needs to know to effectively procure, manage and run its assets. This should take the form of Organisational, or Operational, Information Requirements document (OIR). For the respondents to an EIR, it is important to give clear and concise answers, which should be supported by including examples, certificates and other supporting documents.

The EIRs are intended to establish a clear basis for the information exchanges between the employer and the supply chain, which should make the exchanges more meaningful and help the employer to make decisions based on well-structured information.

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Introduction

Use of Employer's Information Requirements (EIRs) is a fundamental part of the UK Government's BIM Level 2 mandate. For any project to claim compliance with this mandate there must be an EIR, which is a pre-tender document setting out the information to be delivered, and the standards and processes to be adopted by the supplier as part of the project delivery process.

The EIR should enable a potential project team to develop a BIM Execution Plan (BEP) describing how they will provide or exchange information through the stages of the project from initial design to operation.

It is, in effect, the digital aspect of the wider Employer's Requirements set of documents and should not replicate information found elsewhere in this set.

The Employer's Information Requirements will, in essence, ask the questions of the suppliers, be they consultants, contractors or manufacturers that are responded to by the BIM Execution Plan (BEP).

The drive for an EIR should come from an employer's Operational (or Organisation) Information Requirements (OIR), which is what an employer needs to know about their built assets to effectively run their business. In practice, not many employers have an OIR on which to draw, but this does not mean that an EIR cannot be produced.

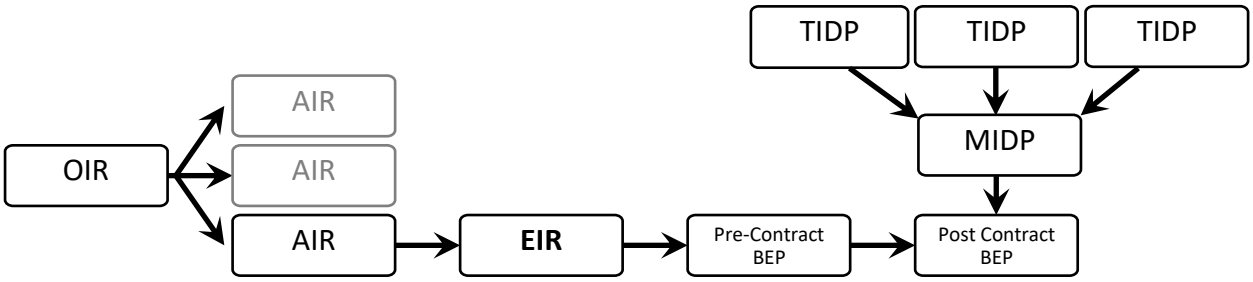

Figure 1 - Hierarchy of Information Requirements

Abbreviation	Expansion	Meaning
OIR	Operation or Organisation Information Requirements	Information that is used to assist the running of an organisation
AIR	Asset Information Requirements	Information regarding a built asset used to effectively run it
EIR	Employer's Information Requirements	Information an employer should ask for in relation to the building of an asset
BEP	BIM Execution Plan	Supply chain response to EIR
MIDP	Master Information Delivery Plan	Amalgam of TIDPs (see below) from suppliers
TIDP	Task Information Delivery Plan	Supplier responsibility to deliver project information

Table 1 - Document Abbreviations

Scope

This guidance note is intended for those that write and respond to Employer's Information Requirement documents, with particular emphasis on the requirements relating to the Landscape Architectural aspects.

This has been written with reference to PAS 1192-2:2013 and should be read in conjunction with this freely available document. This document and other British Standards Institute (BSI) standards and specifications that surround BIM Level 2 are available for download at bim-level2.org.

This guidance note is not intended to be an exhaustive treatise on EIRs, but a useful guide. Each employer and each project will have a unique set of circumstances that need to be addressed and these should be considered at the EIR stage, as far as this is possible or practical.

PAS 1192-2

A PAS (Publicly Available Specification) is a document produced by the British Standards Institution (BSI) that standardises aspects of a product, service or process. PASs are commissioned by industry clients of BSI, who can be individual companies, SMEs, trade associations or government departments. PAS 1192-2 was commissioned by the Department of Business, Innovation and Skills to build on the existing code of practice for the collaborative production of architectural, engineering and construction information, defined within BS 1192:2007.

This document is a Publicly Available Specification, not a British Standard, and it should be regarded as such. A PAS is intended to be a quick method of fulfilling an immediate industry requirement, without the extended time periods necessary to produce a full standard.

The PAS defines what an Employer's Information Requirements document is in two places; Terms and Definitions, clause 3.21 and Annex A (informative) Terms, definitions and abbreviations for BIM documents, clause A.58, they read respectively:

> *"pre-tender document setting out the information to be delivered, and the standards and processes to be adopted by the supplier as part of the project delivery process"*
>
> *"Document setting out the information to be delivered by the supplier as part of the project delivery process to the employer."*

These are broadly consistent definitions, but it should be noted that there are two parts of an EIR described here; "what information we are going to deliver" and "how we are going to deliver that information".

The PAS then goes on to detail the expected origins and contents of an EIR, which are covered later in this guidance note. Also, there is reference to where the EIR will sit within the contract documents.

Generic guidance to the use and purpose of EIRs can be found on the BIM task group website (http://www.bimtaskgroup.org/bim-eirs/).

The BIM Task Group guidance note covers many aspects of an EIR and sub-divides the areas of interest into three sections; Technical, Management and Commercial. This convention will be followed in this guide too.

Overview

The purpose of an Employer's Information Requirements document is to ask design and construction teams the questions relevant to the project, in terms of digital delivery and to inform the procurement and operations of that project, in PAS 1192-2 these are referred to as "Plain Language Questions". The authoring of an EIR falls either on the actual employer or on their representative.

The information sought should only be that which is relevant and useful to the employer and that which is to guide the design team into processes that support the generation of this information.

The EIR will form part of the wider Employer's Requirements or Tender documents set and should not repeat requirements made elsewhere and should not contradict any other requirements of the employer.

There are two general scenarios that can start an EIR, these are for a project that exists having major work done to it, or for a new project, that may not even have a site allocated yet.

Scenario 1 - Existing Project

This can include a construction project that has a site allocated, where there has been preparatory work done for this site, or, more usually, is a project that is undergoing a major renovation or refit.

In this example, there will be things that are understood about the site and, ideally, the project will have been built under a BIM process. This can then influence the choice of questions that the EIR will ask, as the employer will already be well informed about the constraints and aspirations.

In this scenario, there should be a quantity of data coming into the project that should be made reference to in the EIR and made available to the bidding teams. This information may take the form of a site survey or a complete asset model of the existing landscape. Each project will vary, but making this data available will help the early design process.

Scenario 2 – New Build

In this example, only information relating to the aspirations and requirements of the employer will be available. This will limit the certainty of response by the responding teams.

General Requirements

In each of the scenarios above, only information relating to site data is being considered, there is, however, much more to an EIR than this and this section will deal with these other aspects in the round, with more detail in later chapters.

Technical

This section is in relation to the software platforms and formats that the client requires, which are not often known by the client, unless the client has specific platform requirements.

It also talks of co-ordinate systems and levels of detail. Again, it is not that common for these to be deciding factors. If this information is not required, then it should not be included.

Finally, there is the subject of training. This is not training in using design platforms, as that is a matter for an individual company to up-skill itself, more usually this will be training on a Common Data Environment, if one is dictated here by the employer.

Management

This section should include questions relating to all the aspects of managing the project that the employer wishes to control. Depending upon the type, sector and size of the project, these requirements will vary.

Generally, an understanding of the following topics may be asked for, but if it is not relevant to your project, it should not be required:

- Standards
- Roles and Responsibilities
- Planning the Work and Data Segregation
- Security
- Coordination and Clash Detection Process
- Collaboration Process
- Health and Safety and Construction Design Management
- Systems Performance
- Compliance Plan
- Delivery Strategy for Asset Information

Commercial

This section looks to ask questions on the commercial aspects of the project's delivery, as proposed by the responding BIM Execution Plan (BEP). The BIM Task Group guidance note referred to above, looks to ask a lot of questions that may or may not be relevant to your project.

Defining the reasons for the data drops, or information exchanges, at the various stages of the project will help the delivery team to understand what is required to satisfy that purpose. Identifying the client's strategic purpose could also help teams understand what the employer wants to know and why.

Finally, it looks to ask about the BIM capability of the team. If the pre-qualification questionnaire process has been used, this will not be necessary as it is, in effect, a duplication of process.

Employer's Information Requirements – Specific Requirements

This section deals with the topics outlined above in more detail, with some recommendations as to which questions will be suitable and what information can reasonably be asked for. This is not a template of questions; each project will have its own requirements.

The topics will be broken down into two overall sections; "How the project will be delivered" and "What we need to know about the project". These two major sections will be further subdivided to aid readability.

How the project will be delivered

This section covers the "how" of a project in digital and BIM terms. This will cover the BIM documents, software platforms and other areas that will be of interest to the employer. It may not be the case that an employer is interested in all these aspects and it is important for efficient project delivery that only that which matters is asked.

Technical

This part details what questions may be asked of a design team in terms of the technical delivery of a project. This includes choices of software and exchange formats, along with the expected progression of a model through the project stages.

Software Platforms

It is uncommon for an employer to have a specific requirement for a software platform to be used for modelling, analysis or other functions within a project team. Specifying a particular platform may well exclude potential bidders unnecessarily.

What is of more interest to the employer is the format that models will be delivered at the various information exchange points (data drops), so that they are readable and generally useful. This topic is covered below.

If a particular software platform is required by the employer, then this should be clearly stated, along with the version used and a supplementary question posed to the bidders regarding their proficiency in using this software.

Data Exchange Format

This is a more useful topic to look at than specifying a software platform. Thought should be given to those formats that allow the design and construction teams to effectively exchange data and geometry, as well as those that will be of use to the employer.

It may be that there are several formats required to exchange what is needed, but it should be kept to a small a number as possible. Traditional deliverables have been drawings, schedules and specifications in PDF format.

The PDF format is not the simplest to interrogate and much of the data that underlies these drawings and documents will be lost in the process of creating them. There is, however, a case to be made for the static nature of a PDF to be the exchange of record.

A more useful and dynamic exchange format is IFC (Industry Foundation Classes), but this is a vast topic and merely stating “IFC” as a delivery format does not suffice. A “Model View Definition” or “MVD” should also be quoted. An MVD is a subset of IFC used for a particular purpose. The Government mandated COBie (Construction Operations Building Information Exchange) format is actually an MVD of IFC, as is “Co-ordination View” and “BIM Collaboration Format” (BCF).

It may be worth considering different formats at different project stages. The development of the project will yield different sets of information and the best way to consume that information may change. Also consider the Facility Managers, as they will need to assimilate the data into their software at the handover of the project.

Co-ordinates

The purpose of this is to ensure that all of the design and construction team are working to the same co-ordinate system. This can be a real problem when co-ordinating projects, as linking the files from each discipline will not be as simple if differing co-ordinate systems are used.

For linear built assets, such as road or rail projects, it will also be important to understand the linear referencing method.

If known, a site datum point will also provide a useful point to hang the design models from. A survey model may be the best way of communicating this, if one is available. It may also be required to include information relating to any rotations or other co-ordinate deformations that are used.

Level of Detail

This is an opportunity for the employer to define the levels of detail and information to be submitted at the various information exchanges across the project stages. The BIM Task Group guidance note suggests that this can be done as a blanket value for the whole project, changing at each project stage, but this is actually not possible, as different aspects of a project progress at different speeds. For example, the landform and sustainable drainage may be more advanced than the hardstanding elements.

The LI Landscape Digital Plan of Works provides a guide as to what is appropriate at each project stage, so this section could refer to this document. The levels of detail and information should be reflected in the Model Production Delivery Table (MPDT), which forms part of the BIM Execution Plan. The NBS BIM Toolkit is one way of providing this information. Other tools are available.

It should be noted that currently there is no actual definition of the values for levels of detail, definition or information. These are referred to by numbers from 1 to 7 and imply that the detail of each will increase at each stage.

Training

If a particular platform or software is specified for collaboration purposes, then the employer may provide training. Conversely, this section may ask for the suppliers to suggest platforms and ask for training to be provided as part of the solution.

Either way, it is important that there is a common understanding of the proposed solutions and this is best achieved through training programs. Understanding and requiring how these programs are to be materialised, is the purpose of this section.

Management

This section is for the employer to specify the standards and processes that they require to be used on the project to define the BIM process. Equally, they may ask for a schedule of standards from the bidding companies.

If the employer is not a common procurer of built assets, it may be that this information is superfluous to them. In this case, parts of this section should be removed and only that which is of interest asked for.

Standards

These are the standards by which the BIM process will be managed, not the overall set of standards that work across the construction market.

For the UK market, these will generally be the BIM Level 2 set of standards, accompanied by the other “pillars of BIM” as tabulated below:

Number	Description
PAS 1192-2	Capital phase of project delivery
PAS 1192-3	Operational phase of project delivery (Soft Landings)
BS 1192-4	COBie
PAS 1192-5	Security
BS 8536-1	Briefing for design and construction
	CIC BIM Protocol
	Digital Plan of Work
	Government Soft Landings

Other standards may be considered, but they should only be in relation to BIM, information exchange and modelling.

Roles and Responsibilities

If the client wishes to specify who does what on a project, in terms of managing the BIM process, then this section is for that purpose. It may well be that for smaller projects, the appointed team will be able to sort this all out between themselves and the client, or their representative, will not need to delineate this.

It could be requested that the design and delivery teams allocate the roles and responsibilities in the BIM Execution Plan.

Planning the Work and Data Segregation

This is an opportunity for the employer to define, or ask to be defined, how the project models will be divided and what is to be included in each along with what data should specifically be included or excluded from a model.

Some of the topics that may be considered are:

- Model Management
- Volumes, Zones and Areas
- Naming Conventions
- Publishing processes

It is important to remember that these should only be covered if they are of direct benefit to the employer to understand. Otherwise the project design and construction teams can be left to manage these processes.

Security

This section is referring to the security of the data and the security of the data exchange processes, not the security of the built asset, which would be covered elsewhere.

If the project has specific security requirements, then these should be detailed here and clear questions asked as to how the supply team will meet these requirements.

Reference can also be made here to PAS 1192-5, which deals with security around BIM projects, also HMG Security Policy Framework:2014 should be referred to in the case of Government projects. It should be noted that the HMG Security Policy Framework:2014 has been revised since the PAS and BIM Task Group EIR guidance documents were written.

Coordination and Clash Detection Process

Here, the parts of these processes that are of importance to the employer should be either defined or asked for. Usually an employer would expect a project to be co-ordinated to a suitable level as a matter of course, but too often this is not the case and expensive site rework is required.

An understanding of how the design and construction teams will identify and resolve potential hard and soft clashes may be useful to the employer and having outputs that are readable, sharable and auditable could be of value to larger clients.

There does need to be an understanding of what a clash actually is for this process to work. For example; a new tree may have its root ball modelled and this will clash with a terrain model of the soil, but this is what a root ball should be doing, so is not of concern. Alternatively positioning a planting area across the egress route from a building may not generate a clash report, but is potentially much more serious.

Also, an understanding of clash resolution meeting processes and frequency can be of value. An employer may wish to attend these, as they often impact on the final design. For example, fewer

trees within a streetscape may be required by a clash resolution with existing or proposed services, but this may not be acceptable to the client in terms of his urban tree strategy

Collaboration Process

This has two distinct aspects, the technical way in which collaboration is to be achieved and the frequency with which this collaborative exchange is to happen.

The employer should be looking for details of this, as it can materially affect the timescale of the project; too frequent exchanges will take time to actually perform and if they are not frequent enough, then substantial design rework may be required.

The design and construction teams need to demonstrate that there are exchange mechanisms and file formats that will suit all of the team members. The BIM Execution Plan will specify what this is and should be able to demonstrate that this is either a proven technology or that what is proposed has or can be tested before work commences.

In terms of frequency of exchange, there are two ways of looking at this. A team can have a pre-defined schedule of exchange, that is part of the delivery plan, or a team can collocate and share information live.

This second option is less usual, but does foster better communication between team members and issues can be resolved by a simple conversation, rather than a full meeting. This option works best with a team that know each other well and have worked together before. It may be that premises would need to be found for this, which can incur extra costs.

Health and Safety and Construction Design Management

Since PAS 1192-2 was written, the Construction Design and Management (CDM) regulations have changed quite fundamentally, so the BIM Task Group guidance document may not be the best source of information. Health and Safety issues will always be important in construction, so understanding this at the employer level is useful.

The new role of principal designer brings a requirement to perform specific CDM functions and these should be detailed in the BIM Execution Plan.

There are also some simple modelling techniques that could be asked for to highlight risks within the design. For example, a small generic object can be placed with meta-data detailing the risk and its mitigation.

Systems Performance

This section refers to the employer's IT systems. If the employer has any restrictions or special requirements due to their IT systems and platforms, they should be specified here and the BIM Execution Plan should detail how these restrictions are to be dealt with.

An important consideration here is in regard to system security. Employers will want to know what arrangements have been made by their bidders to ensure that the data they are generating is in a secure environment, safe from attack.

This section should not make arbitrary limits on model sizes, especially if the native formats used by designers and contractors are not required to be delivered. What is important is the size of the delivered files and which pieces of software are required to view and read them.

It may be that the employer needs some guidance as to which software is required for them to view the deliverables. It is common that free viewers are available and the employer guided to a download site for that software.

Some employers do ask for a full version of the authoring software and training in the use of that software. This is rarely of much use to the employer and should be questioned if it arises in an EIR.

If the delivery is through IFC, there are many free viewers available and some Common Data Environments (CDE) do provide this functionality also.

For security sensitive projects, software that is web or cloud-based may need to be reviewed. For instance, security protocols, such as firewall controls, may prevent employers accessing web based software and the internet bandwidth available to the employer may be an issue.

Compliance Plan

The compliance plan section looks to ask about quality assurance processes and periods of aftercare. Most of the quality assurance data would be covered by the pre-qualification questionnaire and adherence to ISO 9001.

If specific extra quality assurance procedures are required, then they should be detailed in the EIR for the teams to respond to in their BIM Execution Plan.

Also, if a specific compliance software package is to be used by the employer, then this should be stated in the EIR with details of the input requirements for that software, so that the design and construction teams can respond with proposals for meeting those requirements in their BEP.

This section should also ask about periods of aftercare, as stated above. This ties in with Soft Landings and Government Soft Landings (GSL), as appropriate. The reference here is to management of the model, post completion, measured in years.

Care must be taken here to ensure that the management of the model does not incur unnecessary costs and is not a duplication of work done by facilities management teams.

Delivery Strategy for Asset Information

This section deals with the delivery format of information from the contractor to the facilities management team. Specifying the facilities management software, if known, will help the contractor detail the file type that the information is to be contained within.

Delivery of information to the facilities management (FM) team is a fundamental benefit of the BIM process. The ability of the FM team to use design, construction and product data, delivered by the designers, builders and manufacturers as part of the hand-over documents, is important to the efficient running of an asset.

This question should not detail the actual information required, this is covered in later sections, purely the method by which data should be exchanged.

COBie is specifically designed for this purpose and many facility management software applications can import directly from this format.

Commercial

This part of the employer's information requirements asks for details on the delivery of specific pieces of information, when they are to be delivered and states the purposes of that data, so that the designers or contractors can respond with proposals for the delivery of that information.

Data drops and project deliverables

This section looks to define the contents of the data drops, across the project stages. This can take the form of a table, as shown in the EIR guidance note from the BIM Task Group, as detailed above.

The contents of the table will vary according to the procurement route and the plan of work adopted.

It will also be useful for those responding to the EIR to understand the purposes to which this data is to be put, so they can respond with proposals that suit this purpose.

This section could be very detailed, or it could be a simple table. A view should be taken by the employer as to how prescriptive they wish to be, bearing in mind that time spent responding to the EIR will cost money and that cost will ultimately be reflected in the project costs.

The content of the data drops can be detailed by the use of "plain language questions" (PLQs). These questions can be set out across the project stages, showing what needs to be known and when. Care should be taken when formulating PLQs to enable a structured response, so that they can be compared.

The delivery mechanism for this data should be set out in the sections above, but detail of that delivery can be stated in the BIM Execution Plan under this topic. It is common that BS 1192-4 (Fulfilling employer's information exchange requirements using COBie) is used.

The COBie data should be provided alongside the model deliverables and the traditional deliverables, such as drawings, schedules and specifications.

Client's Strategic Purpose

This section lays out the purposes to which the employer wishes to put the information provided. This could be seen as a duplication of effort, when seen alongside the points made above. There is also no specific response asked for.

The guidance note from the BIM Task Group shows a table of codes that can be used to detail the purposes. It also refers to further purposes, such as reusing parts of a design in other projects. Care must be taken if requiring this purpose, as designs are usually licenced for single use only and insurance provision may need to be extended to cover this.

Defined BIM/Project Deliverables

This section is listed in the guidance note provided by the BIM Task Group, but does not have a chapter detailing what is required.

It is a subject that is probably covered adequately in the section above, but if the employer has a specific requirement for a pre-defined set of deliverables and a format in which they should be delivered, set against project stages, this may be a good place to set that out.

BIM-specific competence assessment

If a pre-qualification questionnaire process has been carried out, then this section may not be required, as it will already have been covered.

The BIM Task Group guidance note breaks down the assessment into a series of topics:

- Capability and Experience
- BIM Execution Planning
- BIM Toolset
- Workload and Resourcing
- Supply Chain

Specific questions under each topic are suggested, but only those that are of material importance to the employer should be asked. The responses should be adequately detailed to fully answer the question, but not contain any superfluous information.

Exemption to this section could be sought by a bidder if they hold a current BIM Level 2 accreditation from an authorised assessor. A copy of the certificate or registration number may be required as evidence of this accreditation.

Changes to other Tender Documents

One of the defining purposes of the BIM Level 2 project is to change as little as possible in the existing set of documents. There are, however, going to be some alterations required and this section sets out to detail this and provide some guidance.

In PAS 1192-2 the documents earmarked to be altered are; pre-qualification questionnaire (PQQ), project execution plan (PEP), tender questionnaire and tender evaluation plan. The BIM Task Group guidance note lists; pre-qualification questionnaire brief (PQQ brief), project execution plan (PEP) and tender evaluation plan.

In the cases of the PQQ brief and the PEP, only a commentary is proposed to be added. These are to confirm that BIM processes are to be used on this project.

The tender evaluation plan (questionnaire) has more substance to it though. Introducing a number of new questions that may be considered.

Consideration should be given, by the employer, as to whether these additional questions are a) answerable and b) relevant. If the answer is “yes” to both of these questions, then they may be included, along with any other requirements that the employer may have that will help them ascertain the suitability of a bidder.

What we need to know about the project

This section covers the “what” of a project. Employers will want to know certain design metrics for a project and these can be asked for in a plain language manner, but should be responded to, as far as is possible, in a digital way, using extracted data from design models.

The majority of the information requirements covered so far have been about process and delivery of files. This section is not specifically covered by PAS 1192-2 or the BIM Task Group guidance document to employer’s information requirements, but it is important to understand the principles of design and how they are being addressed by the design team and what is being built.

All construction projects will require certain levels of performance available in order to use the created space for its intended purpose. This data can include metrics from landscape architecture, structural, services, environmental, and maintenance performance.

The employer’s requirements can range from the number of people in a space, loads imparted on a podium or roof deck, irrigation rates, yields for food production, stormwater runoff rates, water quality from sustainable drainage systems. These metrics can be used by the design team as a “basis of design” and could be reflected back to the employer in a BIM Execution Plan.

The metrics that the employer requires should be the minimum levels necessary to satisfy their business needs. The values proposed by the design team could be different from these values, to demonstrate how systems will actually provide a suitable and safe environment.

Appendix 1 – Further Reading

- PAS 1192-2:2013
  - http://shop.bsigroup.com/navigate-by/pas/pas-1192-22013/
- PAS 1192-3:2014
  - http://shop.bsigroup.com/forms/pass/pas-1192-3/
- BS 1192-4:2014
  - http://shop.bsigroup.com/forms/PASs/BS-1192-4-2014/
- PAS 1192-5
  - http://shop.bsigroup.com/forms/PASs/PAS-1192-5/
- Construction Industry Council
  - http://cic.org.uk/publications/
- Government Soft Landings
  - www.bimtaskgroup.org/gsl/
- Employer's Information Requirements - Core Content and Guidance Notes
  - http://www.bimtaskgroup.org/bim-eirs/
- NBS BIM Toolkit
  - https://toolkit.thenbs.com/
- The Construction (Design and Management) Regulations 2015
  - http://www.legislation.gov.uk/uksi/2015/51/contents/made
- The Construction (Design and Management) Regulations 2007
  - http://www.legislation.gov.uk/uksi/2007/320/contents/made
- The Construction (Design and Management) Regulations (Northern Ireland) 2016
  - http://www.legislation.gov.uk/nisr/2016/146/contents/made

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The Landscape Institute provides a professional home for all landscape practitioners including landscape scientists, landscape planners, landscape architects, landscape managers and urban designers.

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