

Standard Category 1

S1011 A3

Product Selection, Assessment and Authorisation for Use

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1 Purpose

The purpose of this standard is to define requirements such that:

- a) all products used in the operation of the London Underground network have been appropriately assessed for their proposed application, including temporary applications and/or trials;
- b) information concerning the selection, assessment and authorisation of products is maintained in such a way as to be retrievable in future;
- c) LU's product acceptance process is comparable with the system used by the UK national railway
- d) requirements for the selection, assessment and authorisation of products clearly support and integrate with the over-arching standard [S1538 Assurance](#).

2 Scope

2.1 Audience

This standard is relevant to those supplying, selecting, assessing and authorising products for use on the operational network, including Designers, maintainers, contractors and manufacturers.

This standard is generally not applicable to assets owned by others (e.g. Network Rail, commercial development partners or tenants) **except** where these assets are proposed to be located in areas requiring fire compliance assessment, in which case section 3.5 (only) applies.

Note: Section 5.1 indicates which fire compliance standards are applicable to which asset types and location types. Assets situated within locations fitted with fire detection and suppression systems compliant with LU Standards are exempt from fire compliance assessment under standard [S1085](#) (section 3.11 of S1085 refers).

2.2 Applicability

The requirements set out in this Standard apply to physical products, including components, assemblies, embedded software and firmware. These are referred to collectively as 'products' throughout this document.

The requirements set out in this Standard apply in the event of any Product Change. Product Change is defined as any of the following:

- a) The introduction of new Products
- b) Changes to the design, use or maintenance of Products
- c) Changes to embedded software or firmware
- d) Changes to the materials or manufacturing process used in the supply of Products

- e) Changes of manufacturer or location of manufacture
- f) Trials or testing of new Products on the railway infrastructure

A product which forms part of an existing system is deemed to have been assessed for suitability as part of the original design acceptance, and therefore there is no general requirement for products used in 'like for like' maintenance replacement to be reassessed. However, if the product or the associated legislation and standards have changed then the original assessment may no longer be applicable (e.g. where a product contains materials now deemed to be unacceptable).

Products forming part of an existing system whose assessments have the status of 'Expired' (clause 3.6.2) may continue to be used for maintenance 'like for like' replacements. Products which have the status of 'Withdrawn' may no longer be used (see clause 3.2.4).

Note: Any application software and data which forms an intrinsic part of the product and is only accessible to the product manufacturer is within the scope of this Standard.

2.3 Exclusions

Table 1 lists product categories which are excluded from the scope of this Standard.

Product Category	Rationale
Application software and data that can be designed and installed independently from the product manufacture.	This is assessed as part of the assurance process covered by standard S1538.
COTS information technology assets (IPads, PCs, laptops, printers etc.)	Assets do not directly impact the operational railway.
Personal Protective Equipment (including body-worn cameras) and uniforms	Assets do not directly impact the operational railway.
Construction plant (refer to section 5.8)	Covered by standard S1171 <i>All Plant – Acceptance, Use and Maintenance</i> .
COTS (Commercial Off The Shelf) hand tools used in their intended application	Commonly used tools which do not require any railway-specific engineering assessment.
Non-operational equipment and appliances within staff facilities.	This standard is not intended to be applied to non-operational equipment and appliances or any other equipment exempted from standard S1085 within staff facilities e.g. kettles, refrigerators, dishwashers, cooking equipment

Table 1 Product categories excluded from the scope of this Standard

Products excluded from the scope of this standard are still required to meet the minimum legal market requirements for Great Britain for their intended use and environment, see Clause 5.2 for further guidance.

2.4 Approach

Selection of products is fundamentally a design decision that requires both engineering and business input. This standard contains the requirements for which TfL Engineering is accountable and is intended to operate in conjunction with commercial policies and processes.

All products are required to be appropriately assessed for their intended use prior to purchase in line with this Standard, but only Controlled Products, Repeatable Products and Replacement Products are recorded as ‘authorised for use in a specific application’ by TfL Engineering within the Product Information Register (PIR), in accordance with section 3.4.

Evidence of assessment of products in turn supports the achievement of design compliance for the overall system in accordance with standard [S1538](#).

The PIR exists in order a) to provide confidence that Controlled Products have been validated by TfL for the proposed application prior to selection; b) to minimise duplicate assessments of the same product for repeatable applications (Repeatable Products); and c) as a means of capturing information about Replacement Products which are introduced outside of a project.

It is not intended that the PIR should be an exclusive catalogue of products which may be used, rather that all proposed products should be assessed in accordance with this Standard and, for products within the scope of section 3.4, authorisation is captured in the Product Information Register prior to purchase.

Fig.1 illustrates the scope and application of the authorisations which are required to be captured within the Product Information Register:

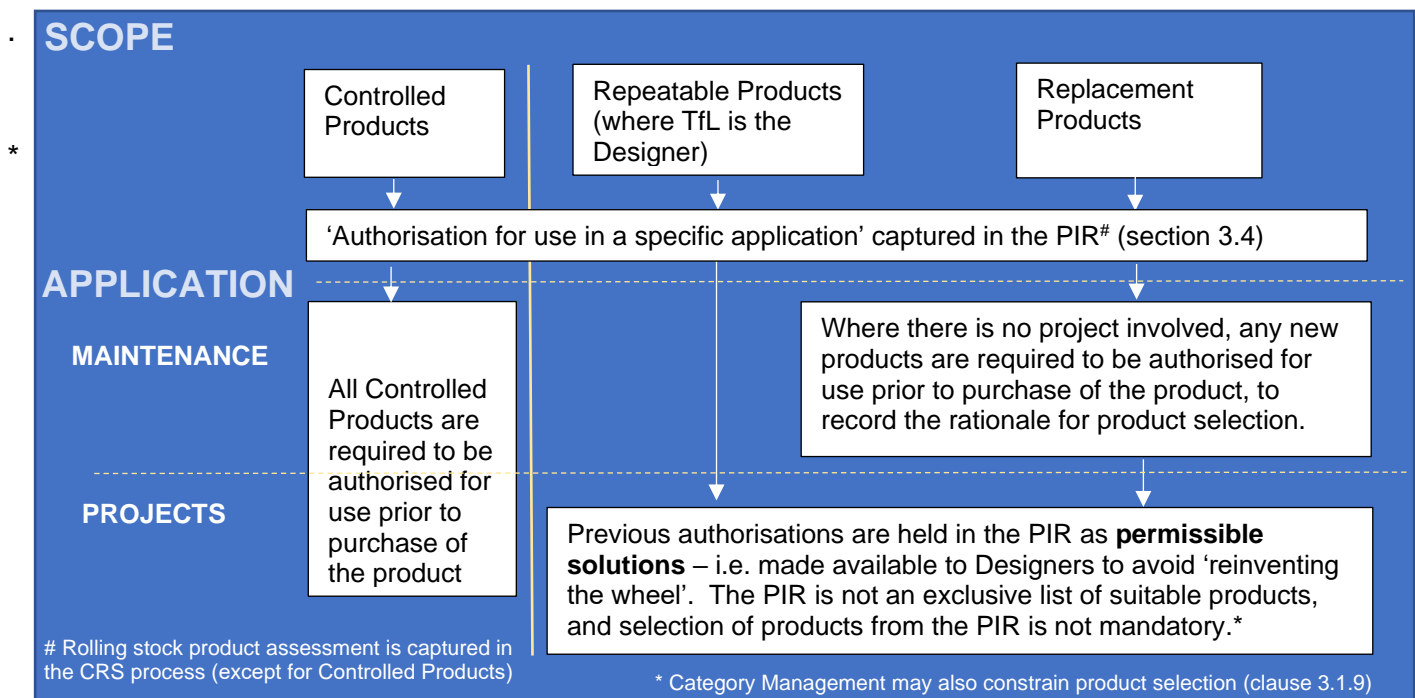


Fig.1 Scope and application of authorisation assessments held within the Product Information Register

Products that are required to be assessed for fire compliance (see section 5.1), but that are not authorised for use in accordance with section 3.4, are assessed and certified for fire compliance (only) in accordance with section 3.5. These products are not designated as 'authorised for use in a specific application'.

Reuse of previous product assessments is encouraged as long as the provenance of the assessment and relevance to the proposed application is understood. Such assessments can include previous assessments by TfL, external conformity assessments including UKCA marking and assessments by others such as Network Rail. To the extent that the application is different, supplementary evidence is required in accordance with clause 3.1.8.

2.5 Guiding Principles

Six general principles inform the requirements within this standard.

1. Products are suitable for use on the London Underground network in a defined application if they satisfy relevant requirements in the following areas:
 - a) Technical compliance with relevant (TfL, national and international) standards and legislation
 - b) Commercial/procurement e.g. fairness and consistency, viability of supplier, category management [note that commercial/procurement requirements are outside the scope of this standard].
 - c) Compliance with discipline-specific requirements as defined in the associated local procedure and asset strategy
 - d) Acceptability to maintainer and operator in terms of whole life cost (including training and spares holding implications) and/or performance
 - e) Look and feel / aesthetics / customer experience / branding / heritage
 - f) Sustainability implications (refer to section 5.7)
 - g) Relevant conditions or constraints of application including system requirements, electromagnetic compatibility, electromagnetic fields, electrical safety and security/cybersecurity
 - h) Specific requirements of the proposed application (including consideration of failure modes where these could have safety consequences, and location-specific requirements such as fire compliance and difficulty of access for maintenance)
2. Designers and maintainers take into account the factors contained in principle no.1 when selecting products, and capture assurance evidence of the supporting assessments.
3. Where TfL is the Designer or maintainer, TfL will record assessments of products authorised for repeatable use in a specific application, in a Product Information Register.
4. This Standard will reflect TfL's Organisational Information Requirements with respect to the information required to be held about products that have been selected for use.

5. TfL will structure the information held in the Product Information Register in line with industry good practice
6. For specific assets, TfL may choose to adopt a Category Management approach in order to restrict the selection of products to a defined list.

3 Requirements

3.1 Product selection within a project

- 3.1.1 The Designer shall verify that each product selected has been appropriately assessed for suitability for use in the proposed application, prior to purchase.

Note: The term 'Designer' in this Standard means any person or organisation responsible for making the product selection decision – see Definitions.

- 3.1.2 Specifically, the Designer shall verify that each product selected has been assessed against the following criteria:

- a) Technical compliance with relevant (TfL, national and international) standards and legislation
- b) Compliance with discipline-specific requirements as defined in the associated local procedure and asset strategy
- c) Acceptability to the maintainer and operator in terms of whole life cost (including training and spares holding implications) and performance
- d) Requirements associated with “look and feel” / aesthetics / customer experience / branding / heritage
- e) Sustainability implications (refer to section 5.7)
- f) Relevant conditions or constraints of application including system requirements, electromagnetic compatibility, electromagnetic fields, electrical safety and security/cybersecurity
- g) Specific requirements of the proposed application and the associated requirements specification(s) (including consideration of failure modes where these could have safety consequences, and location-specific requirements such as fire compliance and difficulty of access for maintenance)
- h) Assessment for the required discipline

Note: Designers are permitted to select products which are not included in London Underground's Product Information Register at the point of consideration, provided that the products concerned are then selected and assessed in accordance with this Standard. Products falling outside the scope of sections 3.4 and 3.5 are not required to be captured in London Underground's Product Information Register.

- 3.1.3 The level of assessment applied pursuant to clause 3.1.2, shall be risk-based.

Note: The criteria listed in 3.1.2 apply to all products, however the level of assessment should be proportionate to the consequence of failure of the product in the proposed application, and the extent to which a previous assessment (whether by TfL or by an external body such as Network Rail, UKCA or CE) is directly applicable (clause 3.1.8 refers). Refer to local discipline procedures and briefing materials for further guidance on risk-based assessment.

- 3.1.4 Where selection of products is prescribed by a requirements specification, the authoriser of the specification shall be responsible for compliance with clauses 3.1.1, 3.1.2 and 3.1.3.
- 3.1.5 The Designer shall verify that, prior to purchase of a product, for all proposed products covered by [R0704 London Underground Controlled Products List](#)
- the product(s) have been authorised for use for the specific application which is proposed (including fire compliance applicable to the specific application); and
 - the supporting assessments have been recorded in London Underground's Product Information Register (PIR) and have not expired (see clause 3.6.2)
- in accordance with section 3.4.
- 3.1.6 Where a Designer internal to TfL proposes to select a product which
- is not currently on the Product Information Register; and
 - is likely to be used repeatably in the same application,
- the Designer shall consult a Product Sponsor for the relevant discipline to agree whether the product should be treated as a Repeatable Product for the purpose of section 3.4, and the assessment captured in the Product Information Register accordingly.

Note: For products which are not covered by the categories defined in R0704 *London Underground Controlled Products List*, there is no obligation on Designers to select products from London Underground's PIR (but note that Category Management may constrain product selection – see clause 3.1.10). However, where a product in the PIR has already been assessed and authorised for a similar application, subject to clause 3.1.8 it will often be expedient for the Designer to select that product, supplementing the assessment in the PIR where necessary in accordance with clause 3.1.8. The presence of a product in the PIR does not relieve the Designer of the obligation to select appropriate products for the proposed application.

- 3.1.7 The Designer shall verify that, prior to purchase of a product, for all proposed products requiring assessment for fire compliance (see section 5.1) and which are not covered by [R0704 London Underground Controlled Products List](#)
- the product(s) have been granted a Fire Safety of Materials Compliance Certificate covering the location/application in which they are proposed to be used; and
 - the supporting assessment has been recorded in London Underground's Product Information Register
- in accordance with section 3.5.
- 3.1.8 To the extent that a previous assessment of a product is relied upon, the Designer shall confirm prior to each use that
- the assessment is relevant to the proposed application, adequate (in accordance with clause 3.1.2), has not expired (see section 3.6.2), and the supporting information is still relevant
 - the proposed system configuration of the product, i.e. relationship to other interfacing assets and other disciplines, is the same.
 - the product itself and/or associated legislative and standards

requirements have not changed since the assessment was undertaken

Note: Previous assessments include those in London Underground's Product Information Register (PIR). Information contained in LU's Product Information Register is to the best of TfL's knowledge correct at the time of the last review. Evidence of product assessment by external bodies (e.g. UKCA, CE, Network Rail) may be put forward, provided that the difference in application and environment is understood and assessed. Refer to sections 5.2 and 5.3 for further guidance on UKCA/CE marking.

- 3.1.9 Technical and safety factors (see clause 3.1.2) being equal, products with improved sustainability shall be selected in preference to products which have been used previously on London Underground.
- 3.1.10 Where product selection is restricted by a Category Management approach, the Designer shall select products from this framework unless agreed otherwise with a Product Sponsor for the discipline concerned.

Note: Category Management is where a formal procurement exercise has been undertaken to select one or more suppliers for a particular product category, in order to achieve economies of scale and build long-term supplier relationships. Where TfL is the Designer, it is recommended that any regularly used products covered by a Category Management framework are treated as Repeatable Products for the purpose of section 3.4, capturing the assessment in the PIR accordingly.

- 3.1.11 For each project, Product Assessment Information (i.e. evidence of the rationale for selection of all products used) shall be captured and submitted for review in accordance with section 3.3.
- 3.1.12 A product that has a status of 'Withdrawn' within the Product Information Register shall not be selected for use.

Note: Some historic product assessments have a status of 'Withdrawn' because the assessment had expired and there was not a separate 'Expired' status available at the time (see clause 3.6.2). Where there is a continuing need to use the product it is expected that the product assessment will be reviewed with a view to reinstating its authorisation.

3.2 Product selection within maintenance

- 3.2.1 All products proposed by the maintainer shall have been assessed for suitability by TfL Engineering before they can be used on LU.

Note: A product which forms part of an existing system is deemed to have been assessed for suitability as part of the original design acceptance, and therefore there is no general requirement for products used in 'like for like' maintenance replacement to be reassessed. However, if the product or the associated legislation and standards have changed then the original assessment may no longer be applicable (e.g. where a product contains materials now deemed to be unacceptable). Products forming part of an existing system whose assessments have the status of 'Expired' (clause 3.6.2) may continue to be used for maintenance 'like for like'

replacements. Products which have the status of 'Withdrawn' may no longer be used (see clause 3.2.4).

3.2.2 Where a product forming part of an existing system is proposed to be substituted by a different product (including a different version of the same product) **not** as part of a project, then

- a) assurance evidence that the products are functionally interchangeable and suitable in accordance with the criteria defined in clause 3.1.2 shall be produced; and
- b) this evidence shall be submitted for review by the appropriate TfL Head of Profession/Technical Head (or their accredited delegate) in accordance with section 3.3, and captured in the Product Information Register (or CRS system) in accordance with section 3.4.

Note: When a product which forms part of an existing system is replaced with a different product (a 'Replacement Product'), this constitutes a design change to the existing system. In this scenario, TfL will typically be the Design Authority for the existing system. The evidence can take the form of an approved interchangeability statement. Relevant data should still be updated within the asset management system when individual assets are substituted. If modifications to drawings are required, then the change is treated as a project and the requirements of section 3.1 apply.

3.2.3 To the extent that a previous assessment of a product is relied upon, the maintainer shall confirm that the assessment is appropriate and has not expired (see section 3.6.2), and that the product itself and/or associated legislative and standards requirements have not changed since that assessment was undertaken.

3.2.4 In the event that a problem is identified with an existing product to the extent that a systematic replacement is required where that product is installed, the appropriate TfL Head of Profession/Technical Head shall

- a) liaise with the maintenance organisation to mitigate the risk; and
- b) arrange for the product to be captured in the PIR with a 'Withdrawn' status identifying the affected applications and the justification for the product withdrawal.

Note: Requirement b) applies regardless of whether the product was previously captured in the PIR. Where a product remains authorised in the PIR for other applications, the authorisation assessment is updated to exclude explicitly the applications for which authorisation is withdrawn (section 3.4).

3.3 Capture and submission of Product Assessment Information

3.3.1 The Designer/maintainer (as applicable) shall capture Product Assessment Information comprising evidence of the assessment(s) in support of sections 3.1 / 3.2 (as applicable) and submit this to the appropriate TfL Head of Profession/Technical Head (or accredited delegate) for information to allow a risk-based review prior to purchase of products, allowing sufficient time for stakeholder consultation.

Note: For projects, the Designer is encouraged to consult the relevant Discipline Engineer in the first instance. Where procurement timescales permit, the recommended approach is to incorporate the issue of the Product Assessment Information within the Conceptual Design Statement or Compliance Submission so that this can be reviewed in the context of the proposed application. For safety critical systems, Product Assessment Information may reside more logically within a system safety case structure.

The time required by LU for the risk-based review will depend on the complexity of the product and its proposed application. Typically four weeks will be sufficient, however complex assessments will need longer.

The provisions of clauses 3.3.1 to 3.3.4 do not replace the obligation for Controlled Products to be captured in the Product Information Register in accordance with section 3.4.

3.3.2 The Product Assessment Information shall uniquely identify each product used including the 'responsible person' for each product e.g. brand or manufacturer.

Note: For products which are UKCA/CE marked, the 'responsible person' will be the party that has obtained the UKCA/CE marking – typically the manufacturer, their authorised representative or an importer, in line with UK government guidance. <https://www.gov.uk/guidance/ukca-marking-roles-and-responsibilities#importers>.

3.3.3 Provided that the TfL Head of Profession/Technical Head (or their accredited delegate) is content with the Product Assessment Information, they shall:

- a) respond to the Designer with 'no objection' to the use of the product(s) (subject to the approval of the system design by the accountable Designer); and
- b) determine whether the product and associated Product Assessment Information should be captured by TfL Engineering in the Product Information Register (sections 3.4, 3.5 and 3.6).

Note: The Head of Profession/Technical Head (or their accredited delegate) will not specifically 'authorise' use of a product except in accordance with section 3.4. An external Designer selecting a product which is not a Controlled Product, and which does not require assessment for fire compliance, is not required to await inclusion of the product within the PIR, before purchasing the product .

3.3.4 The TfL Head of Profession/Technical Head (or their accredited delegate), acting reasonably, shall be entitled to reject the Product Assessment Information in respect of a specific product, where in their professional judgement:

- a) the Product Assessment Information provided is insufficient for the proposed application; and/or
- b) there is no clear benefit to LU from selection of a different product from that currently in general use for the same application.

Note: Introduction of products new to LU can bring significant benefits such as obsolescence mitigation, improved reliability or improved sustainability, but can also impact maintenance adversely by increasing training and spares holding requirements). Where a product is proposed which is new to LU, it is recommended that the Designer should consult the relevant Head of Profession/Technical Head

(or their accredited delegate) and the relevant maintenance stakeholder(s) at an early stage prior to formal submission.

- 3.3.5 Where a product which is “authorised for use in a specific application” within the Product Information Register is being used in that application and in compliance with the associated conditions, then
- a) it is not required to submit the product to the TfL Head of Profession/Technical Head for risk-based review in accordance with clauses 3.3.1 to 3.3.4; and
 - b) a statement to that effect shall constitute the Product Assessment Information for that product
- 3.3.6 The Product Assessment Information provided in accordance with clauses 3.3.1 and/or 3.3.5 shall be referenced, and where necessary updated
- a) For projects, within the Design Compliance Submission;
 - b) For maintenance changes, within the Product Information Register
- 3.3.7 For projects, the Project Engineer shall make a declaration in the design compliance submission(s) for the project to the effect that
- a) designers have discharged their duties under section 3.1 so that the products used have been assessed in accordance with this standard; and
 - b) to the extent that previous product assessment(s) have been relied upon, that the relevant designer(s) have confirmed these assessment(s) to be appropriate for the specific application in accordance with clause 3.1.8 and that any differences in application have been assessed.
- 3.3.8 For projects, any additions or amendment to the Product Assessment Information between acceptance of the design compliance submission and project completion, shall be agreed with the TfL Head of Profession/Technical Head (or their accredited delegate) in accordance with clauses 3.3.1 to 3.3.5 inclusive, and the amendments referenced within the consent to operate report.

Note: Where the product selection decision is made by a contractor (i.e. the contractor is not simply purchasing an ‘industry standard’ CE/UKCA marked product in accordance with the design), selection of the product is a design decision and the duties of the Designer in this standard therefore apply to the contractor in respect of that decision.

- 3.3.9 Where a product is proposed to be applied outside the manufacturer’s recommendations, whether for its application or for its maintenance regime, the responsible Designer or maintainer proposing the deviation shall include the justification for the deviation within the Product Assessment Information.
- 3.3.10 Each TfL Engineering asset discipline shall establish a local procedure that defines for that discipline:
- a) the discipline-specific application of this Standard for product assessment and selection, including which types of products should be assessed as Repeatable Products;

- b) the competence requirements for undertaking product assessments;
- c) the process for stakeholder consultation when a new product is proposed;
- d) the process for capturing and maintaining Product Assessment Information; and
- e) roles and responsibilities

Note: The local procedure for the Track discipline is [PR0124](#).

3.4 Authorisation for Use in a Specific Application

3.4.1 Where the need for a product to be used on the London Underground network has been confirmed by a Product Sponsor, and the product

- a) is covered by the categories of Controlled Products defined in [R0704 London Underground Controlled Products List](#); or
- b) are intended to be used in a repeatable specific application (refer to clause 3.1.5), **and** TfL is the Designer or maintainer responsible for selecting the product ('Repeatable Products'); or
- c) is being selected to replace part of an existing system, for which TfL is the design authority ('Replacement Products');

then, prior to purchase of the product, TfL Engineering shall

- i) request appropriate evidence from the Applicant, as identified by the Assessor
- ii) undertake an assessment of the product for suitability for the specific application(s) proposed, in accordance with the criteria in section 3.1.2; and
- iii) record this assessment together with the supporting evidence, within the Product Information Register

Note: The primary purpose of capturing an assessment in the Product Information Register is to avoid the need for regular duplicate assessments where a product is used repeatedly in a consistent application, subject to clause 3.1.8.

Where available, TfL will link to evidence in external repositories of verified product information from within the PIR.

Local procedures (clause 3.4.6) provide guidance on which products should be treated as Repeatable Products.

Where the proposed application of a product involves multiple disciplines, a lead discipline is assigned by mutual agreement; the Assessor co-ordinates input from the other interested disciplines.

New or innovative products will not be assessed speculatively prior to a decision being made to commit to a trial - see section 5.9.

3.4.2 Subject to satisfactory assessment, TfL Engineering shall issue a certificate which designates the product as "authorised for use in a specific application" and which shall contain the following information as applicable:

- a) the product description and configuration details including:
 - 1. source of product (brand or manufacturer details);
 - 2. model/part number;

3. supporting information used in the assessment e.g. references to drawings, data sheets, manuals etc. including version numbers
 4. software and hardware references;
 5. product version numbers;
 6. digital object identifier;
 7. Uniclass code;
 8. London Underground stores number
- b) details of the specific application(s) for which the product(s) have been assessed;
 - c) the engineering discipline(s) for which the product(s) have been assessed;
 - d) any specific conditions or exclusions governing the use of the product, including but not limited to any restrictions associated with fire compliance of materials (compliance with standards S1085/S1180/BS9992 as applicable), cybersecurity, security, electromagnetic compatibility, electromagnetic fields or electrical safety;
 - e) details of the assessed documents;
 - f) previous certificate history;
 - g) the scope of acceptance;
 - h) names of the lead Assessor and Applicant (or Manufacturer/Manufacturer's authorised representative if external);
 - i) date of issue;
 - j) the expiry date for the assessment (see section 3.6);
 - k) where applicable, if a product is or is not accepted for use in accordance with the UK Interoperability Regulations;
 - l) general terms and conditions

Note: Product acceptance of individual products supports but does not substitute for design acceptance of the system in which the product is used (see section 3.1). The authorisation of the product is restricted to the specific application defined on the certificate. Conditions are additional to the definition of the specific application e.g. for trial use only, specific maintenance requirements etc. Where, following assessment, a product is not authorised for use even with conditions, no certificate is issued but the assessment is still captured in the Product Information Register.

- 3.4.3 The assessment process shall be fully auditable.
- 3.4.4 Prior to issue of a certificate, the assessment shall be endorsed by an Acceptance Manager who shall be independent of the Assessor.
- 3.4.5 With the exception of Controlled Products (which will follow the process above), assessment of products managed by the Vehicles discipline shall be captured
- a) prior to acceptance of the train from the train supplier, in accordance with the train supplier's process; or
 - b) subsequent to acceptance of the train from the train supplier, as part of the *Change to Rolling Stock (CRS)* process (described in [G1100](#))
- and shall not be captured in the Product Information Register or certificated in accordance with clause 3.4.2.
- 3.4.6 Local discipline product acceptance procedures shall provide guidance on the types of products that are intended to be treated as Repeatable Products for the discipline concerned.

Note: The local discipline may determine for example that there is no benefit in assessing a particular type of product in isolation from its application; the local procedure may therefore exclude certain types of product from the category of Repeatable Products.

3.4.7 Where applicable and available, the following information shall be captured for products held in the PIR:

- a) Maintenance regime
- b) Objective feedback on in-service experience
- c) Power rating
- d) Power utilisation when operating
- e) Estimated annual energy consumption
- f) Environmental Product Declarations or Lifecycle Assessments
- g) Whole life carbon information

3.5 Fire Safety of Materials Compliance Assessment

3.5.1 Where the need for a product to be used on the London Underground network has been confirmed by a Product Sponsor for the primary engineering discipline for which the product is proposed to be used, and the product:

- a) is required to be assessed for fire compliance (refer to section 5.1); and
- b) is not a product which is authorised for use in a specific application in accordance with section 3.4

then prior to purchase of the product TfL Engineering shall

- i) request appropriate evidence from the Applicant, as identified by the Assessor;
- ii) undertake an assessment of the product against the relevant fire standard(s) for the proposed application, in accordance with the criteria in section 3.1.2; and
- iii) record the evidence of compliance against the relevant standard(s) within the Product Information Register.

Note: No fire compliance assessment is required for products used in applications/locations exempted from standard S1085 (see section 3.11).

Note: Where available, TfL will reference evidence from external repositories of verified product information controlled by Responsible Authorities.

3.5.2 Subject to satisfactory or conditional assessment of acceptability of the compliance evidence from a fire safety of materials perspective, TfL Engineering shall issue a 'Fire Safety of Materials Compliance' certificate, which shall contain the following information as applicable:

- a) the product description and configuration details including:
 - 1. source of product (brand or manufacturer details);
 - 2. model/part number;
 - 3. supporting information used in the assessment e.g. references to drawings, data sheets, manuals etc. and version numbers
 - 4. hardware references;

5. version numbers;
 6. digital object identifier;
 7. Uniclass code;
 8. London Underground stores number
- b) the standard(s) against which the product has been assessed (see section 5.1)
 - c) the location and/or application categories supported by this assessment
 - d) Any conditions or exclusions imposed on the use of the product including any system application requirements
 - e) details of the assessed documents including any concessions relating to fire compliance;
 - f) previous certificate history;
 - g) names of the lead Assessor and Applicant (or Manufacturer/Manufacturer's authorised representative if external)
 - h) date of issue;
 - i) the expiry date for the assessment (see section 3.6)
 - j) general terms and conditions

Note: If any of the details on the certificate change, then the assessment will need to be updated and an updated certificate issued before the authorisation can be applied to the updated product.

Non-compliance with the relevant fire standards may only be authorised by means of a concession. Where a generic concession is issued for a product, this should be referenced in the Fire Safety of Materials Compliance Certificate. Where a product is found to be unsuitable for use in locations and applications covered by the relevant fire standard even with conditions, no certificate is issued but the assessment is still captured in the Product Information Register. The product concerned may still be acceptable from a fire compliance perspective for use in other locations/applications (refer to section 5.1 for more guidance).

A separate Fire Safety of Materials Compliance Certificate will not normally be issued for products authorised for use in accordance with section 3.4.

- 3.5.3 The assessment process shall be fully auditable.
- 3.5.4 Prior to issue of a certificate, the assessment shall be endorsed by an Acceptance Manager who shall be independent of the Assessor.
- 3.5.5 With the exception of Controlled Products (which will follow the process above), fire safety assessment of products managed by the Vehicles discipline shall be captured
- a) prior to acceptance of the train from the train supplier, in accordance with the train supplier's process; or
 - b) subsequent to acceptance of the train from the train supplier, as part of the *Change to Rolling Stock* process (described in G1100)

and shall not be captured in the Product Information Register or certificated in accordance with clause 3.5.2.

3.6 Information Management

- 3.6.1 For projects, Product Assessment Information captured in accordance with section 3.3, including any changes occurring subsequent to the compliance submission, shall be included in project handover information.

Note: This project-specific information provides the record of why the products which form part of the operational system were selected, and is therefore not updated in the event of a product change post-handover. This historic information forms part of project records and will not be captured within the Product Information Register unless the criteria in section 3.4.1 or 3.5.1 are met. Refer to the Asset Information Requirements in Pathway for further information.

3.6.2 For all products authorised for use in a specific application in accordance with section 3.4, a Product Sponsor from the appropriate discipline shall validate the currency of the associated information held in the Product Information Register at regular intervals not exceeding five years or, in the absence of such a review the assessment shall be identified as “Expired”

Note: At the time of authorisation for use in a specific application, TfL Engineering assigns a default expiry date in accordance with the local procedure for the engineering discipline concerned. This is intended to mitigate the risk of register users inadvertently relying on out of date information. The level of assessment required at renewal of an assessment, is agreed between the Assessor and the Acceptance Manager.

3.6.3 Asset data which is provided as part of project handover information, shall identify for each asset, both the specific product(s) used and the associated Product Assessment Information.

3.6.4 The asset data referenced in clause 3.6.3 shall be updated in the event of a maintenance change (clause 3.2.2).

Note: Clauses 3.6.3 and 3.6.4 are intended to support the creation over time of a ‘golden thread’ of data (section 5.6 refers), where the individual products used can be traced from manufacture to decommissioning.

3.7 Testing and Trialling of products / Temporary Applications

3.7.1 Any request to test or trial a product on the LU Network, or to use a product in a temporary application, shall include

- a) details of the management and monitoring arrangements; and
- b) evidence to show that all credible risks have been identified and either eliminated or reduced to a level that is tolerable and ALARP; and
- c) details of how the trial will be closed out.

Note: Where a product being tested or trialled has not been handed over to LU and is non-compliant with LU standards, seek advice from the relevant Head of Profession/Technical Head on whether a concession is required to manage the risks associated with the non-compliance

3.7.2 Any product which is covered by the categories of Controlled Products shall be authorised for use in accordance with section 3.4 prior to testing or trialling.

3.7.3 For testing or trialling of any other product, the relevant TfL Head of Profession/Technical Head (or Product Sponsor) shall be consulted by the Designer to determine whether the product and associated Product Assessment Information

should be captured in the Product Information Register prior to commencement of the test/trial.

- 3.7.4 Before a product may be trialled in a location/application which needs to be assessed for fire compliance (refer to section 5.1), either
- a) The product shall be assessed for fire safety and a certificate issued in accordance with section 3.5; or
 - b) A concession against the relevant fire standard shall be obtained.

4 Responsibilities

4.1 Designer

The term 'Designer' in this Standard is intended to have the meaning assigned in the CDM Regulations, being *“any person (including a client, contractor or other person referred to in these Regulations) who (a) prepares or modifies a design; or (b) arranges for, or instructs any person under their control to do so”* – i.e. it is intended to apply to any persons or organisations responsible for making the product selection decision. This can include maintainers, procurement personnel, project managers and sponsors as well as engineers.

The Designer is accountable for confirming that products selected have been assessed for suitability for the proposed application in accordance with the criteria identified in clause 3.1.2.

4.2 Maintainer

When selecting a product not as part of a project, the Maintainer is accountable for confirming that any product selected has been assessed for suitability in accordance with the criteria identified in clause 3.1.2, engaging TfL Engineering as necessary.

The term 'Maintainer' in this context applies to any person or group of people making the product selection decision.

4.3 Engineering Heads of Profession/Technical Heads

Accountable for:

- a) Arranging for appropriate acceptance and/or assessment requirements to be defined for all Products within their discipline.
- b) Identifying which products will be designated as Controlled Products for their asset discipline, and which are therefore required to be captured on the Product Information Register
- c) Identifying a non-exclusive list of products for repeatable use which are required to be captured on the Product Information Register
- d) accrediting Product Sponsors and Acceptance Managers
- e) accrediting Discipline Engineers as Assessors in line with their individual competence levels and specialisms within the discipline

- f) determining what, if any, assurance is required regarding compliance with any limitations or conditions attached to a product acceptance certificate and monitoring that this assurance is obtained.
- g) Production and maintenance of the product acceptance process for their asset discipline

Where Product Changes involve or affect more than one asset discipline, the Profession Heads concerned shall agree who will lead the acceptance process.

4.4 Product Sponsor

The Product Sponsor is an accredited Discipline Engineer who provides advice on product acceptance for the asset discipline concerned. When a new product is proposed for inclusion in the Product Information Register, the Product Sponsor is accountable for confirming that there is a business requirement for the product in question. For products which are not Controlled Products, the Product Sponsor confirms whether the product should be assessed as a Repeatable Product for inclusion in the Product Information Register.

The Product Sponsor agrees the information requirements with the relevant Head of Profession/Technical Head.

Where the acceptance requirements specify that trials are to be conducted on the LU Network the Product Sponsor is accountable for making the arrangements for the trials.

4.5 Product information administrator

The product information administrator is responsible for maintaining the information within the Product Information Register, liaising with Product Sponsors and Assessors as appropriate.

4.6 Product Register Manager

The Product Register Manager is responsible for overall administration of the Register.

4.7 Applicant

For products which are proposed to be entered in the Product Information Register, the Applicant is responsible for providing information as may reasonably be required to support product assessment.

The Applicant is a representative of TfL. The Applicant is not the Product Sponsor who is considering the application.

An application may also be submitted by the Manufacturer/manufacturer's authorised representative (see clause 4.11).

4.8 Assessor

The Assessor is a Discipline Engineer who has been specifically accredited by the relevant Head of Profession/Technical Head to undertake or review product assessments for their asset discipline. They co-ordinate all parties involved in defining the acceptance and undertaking the assessment of proposed Product Change, engaging Assessors from other disciplines with an interest in the product and other specialists as appropriate.

Note: 'Other specialists' in this context refers to individual experts covering aspects not specific to an individual engineering discipline, such as cybersecurity, electromagnetic compatibility, electromagnetic fields, electrical safety, human factors, security. The specialists required will vary according to the nature of the product and its proposed application.

The Assessor co-ordinates elements of the assessment so that these are undertaken in a logical sequence which optimises the use of available resources and enables early termination of the process should it become evident that the proposed Product Change under consideration is unacceptable.

The Assessor considers Engineering and SHE acceptability together with operational and maintenance readiness, based on the evidence received.

The Assessor can be the same person as the Product Sponsor but must always be independent of the Acceptance Manager.

4.9 Acceptance Manager

The Acceptance Manager is a Discipline Engineer who has been specifically accredited by the relevant Head of Profession/Technical Head to act as Acceptance Manager, and is competent in assurance processes including Engineering Safety Management. The Acceptance Manager can be the same person as the Product Sponsor but must always be independent of the Assessor.

4.10 Commercial

The commercial team liaises with TfL Engineering as necessary to confirm that a product is acceptable from an engineering perspective and is responsible for managing the selection of suppliers and products in a manner compliant with procurement policies and regulations. The team provides advice to Designers and maintainers so that any relevant commercial considerations are taken into account when defining the business acceptance requirements.

4.11 Manufacturer/Manufacturer's authorised representative

The Manufacturer of the product is responsible for the provision of information and evidence as may reasonably be required to support product assessment.

The Manufacturer is also responsible for notifying TfL of any changes to previously certified products, where those changes fall within the definition of Product Change as described in section 2.2.

Where the Manufacturer is not the entity responsible for placing the product on the market in Great Britain, the responsibilities of the Manufacturer fall to the manufacturer's authorised representative.

The Manufacturer of the product and/or their authorised representative are the only external parties permitted to submit an application for product authorisation, and then only in relation to a business need confirmed by a Product Sponsor.

In some cases the Manufacturer may be internal to TfL.

5 Supporting information

5.1 Fire compliance standards

5.1.1 The applicable fire standards against which products need to be assessed for fire compliance vary according to the nature of the product and the location where it will be used. These are summarised in Table 2.

Standard	Applicability	Comment
LU standard S1085 <i>Fire Safety Performance of Materials</i>	LU standard S1085 applies to underground and sub-surface locations as defined in LU standard S1086.	Evidence of compliance is required to be provided by each party contracted to LU. Products applied in accordance with the ‘Non-applicable and excepted materials and locations’ section of Standard S1085 are not required to be assessed and certified for fire compliance.
LU standard S1180 <i>Standard for Rolling Stock</i>	LU passenger and engineering trains	Contains a table of fire test methods and acceptance criteria. Points to relevant British Standards including BS45545 and BS6853.
BS9992 <i>Fire safety in the design, management and use of rail infrastructure — Code of practice</i>	All rail infrastructure (including locations where S1085 does not apply)	Covers requirements for the design of rail infrastructure as a whole. Compliance with the sub-surface requirements in Table 7 of BS9992 does not need to be assessed separately where a product has been assessed to comply with S1085 (S1085 being a more onerous standard). However, the requirements of Table 8 of BS9992 apply to enclosed stations, i.e. above ground stations which are not in scope of standard S1085; compliance with these requirements is not automatically addressed by compliance with standard S1085 and does need to be assessed separately for products used in these locations.

Table 2 Fire Compliance Standards relating to London Underground

5.1.2 Standard S1085 also points to prescriptive requirements in the *Fire Precautions (Sub-surface Railway Stations) England Regulations 2009* with respect to internal wall and ceiling finishes.

5.2 UKCA marking and CE marking

5.2.1 Following the UK’s exit from the European Union (EU) on 1 January 2021, the UKCA mark has been introduced for products placed on the market in Great Britain (“**GB**”). The GB market includes England, Wales and Scotland (but not Northern Ireland, for which different rules apply).

5.2.2 The UKCA marking regime applies to categories of products defined by the UK government at <https://www.gov.uk/guidance/using-the-ukca-marking>.

5.2.3 The European Union’s existing CE marking scheme continues to be legally equivalent to UKCA marking for the specific product categories and within the timescales defined in UK government guidance.

Note: At the time of publication of this standard, acceptance of CE marking had been extended indefinitely for certain product categories, but not for all. Refer to online government guidance for latest information. <https://www.gov.uk/guidance/placing-manufactured-goods-on-the-market-in-great-britain#full-publication-update-history>

5.2.4 The entity responsible for obtaining a UKCA or CE mark is the entity which places the product on the market in Great Britain; this will normally be either the manufacturer of the product, or the manufacturer's 'authorised representative' (which can be an importer, brand owner or other distributor).

5.3 Citation of UKCA or CE marking and/or other industry accepted markings in support of Product Assessment Information

5.3.1 Products which are UKCA or CE marked are required to have an associated Declaration of Conformity. The UK Declaration of Conformity lists all applicable UK Regulations and Designated Standards with which the product is deemed to comply. In the case of CE marking, the EU Declaration of Conformity lists the corresponding EU Directives and Standards listed in the Official Journal of the EU with which the product is deemed to comply.

5.3.2 UKCA or CE marking (or other industry accepted markings) typically includes consideration of production processes and gives confidence that products will comply consistently with the British, European and/or International Standards against which the product has been assessed. However, where a British, European or International Standard provides different compliance levels, the UKCA/CE mark or other industry accepted mark only signifies compliance with the least onerous level.

5.3.3 The presence of UKCA/CE marking or other industry accepted mark does not necessarily mean that the product meets all relevant London Underground and TfL standards or that it is suitable for the proposed application.

5.3.4 Nevertheless, to the extent that the requirements that have been validated for UKCA/CE marking or other certification align with the requirements for the specific application, UKCA/CE marking or other industry accepted mark can be cited in support of Product Assessment Information in accordance with clause 3.1.8.

5.4 Sources of Product Information to support assessment of products

5.4.1 Supplier and distributor websites can be a useful source of product data sheets and/or manuals containing the specification of individual products. Seek advice regarding the commercial acceptability of a brand or supplier that has not been used previously.

5.4.2 External digital repositories (e.g. BSI Identify, Lexicon) are emerging that seek to provide a verified and up to date source of information about the products contained therein, and aim to facilitate comparison of products and support product traceability throughout the product lifecycle. Such repositories can be helpful sources of product information but are not yet comprehensive and will typically not have captured evidence of compliance against LU-specific requirements.

5.4.3 A risk-based approach should be adopted to the assessment of products for use on LU, taking into account assessments already undertaken by other agencies e.g. as

part of the process of gaining UKCA marking, or assessments undertaken by other public sector clients such as Network Rail.

- 5.4.4 Claims such as reliability, product life or wrong side failure rate are difficult to verify at the point of purchase, and it may be appropriate to undertake a trial or some form of independent assessment where the consequences of the information being incorrect are significant.
- 5.4.5 As the demand for more sustainable products grows, so do misleading labels and claims from manufacturer's incorrectly advertising their products as better for the environment e.g. methane derived products claiming to be clean fuels. Such claims should be reviewed and verified before being quoted.
- 5.4.6 The Energy Technology List (<https://etl.beis.gov.uk/>) provides details of a number of energy-saving products but should not be treated as an exclusive list; other suitable energy-saving products may also be available.
- 5.4.7 Guidance on life cycle costing is provided in [RICS Life cycle costing guidance](#)
- 5.4.8 Information on sustainability impacts of products should rely on a hierarchy of information: specific product Environment Product Declarations to BS EN 15804, ISO 14025 or equivalent; generic product Environment Product Declarations to BS EN 15804, ISO 14025 or equivalent; estimation of whole life carbon and environmental impacts through TfL Whole Life Carbon Tools to BS EN 15804 or equivalent.

5.5 Product classification

- 5.5.1 Uniclass is a unified classification system for all sectors of the UK construction industry. It provides a taxonomy linking entire systems such as a railway to individual component types, compliant to BS 12006.
- 5.5.2 London Underground generally follows Uniclass for fixed assets, although classifications at a lower level are sometimes necessary.
- 5.5.3 Other relevant standards for product classification are ISO15926 and ISO10303.

5.6 'Golden Thread' of product data

- 5.6.1 The Building Safety Act 2022 was introduced in response to the Independent Review of Building Regulations and Fire Safety led by Dame Judith Hackitt following the 2017 Grenfell Tower disaster.
- 5.6.2 The Act places obligations on the 'accountable person' who has responsibility for managing a 'higher-risk building' to maintain 'prescribed information' about the building and to keep this up to date so far as is reasonably practicable.
- 5.6.3 Maintaining traceability of product information is a key element of this approach and this is sometimes referred to as the 'golden thread' of data.
- 5.6.4 Currently the definition of 'higher-risk' building is limited to tall residential buildings, and so the Act does not currently apply to operational premises forming part of the transport network.
- 5.6.5 The achievement of a comprehensive and robust 'golden thread' of product data would enable full product traceability, for example enabling a user to interrogate the

asset database to find comprehensive record of the history of the product – who made the product, who supplied it, what product assessment was done, when it was last refurbished etc. As digital information systems become more inter-connected, the achievement of the ‘golden thread’ will become a realistic prospect.

- 5.6.6 Where available, Digital Object Identifiers support the achievement of this ‘golden thread’ for the product throughout the life of the product. Consider whether this approach will be appropriate when specifying a new system.

5.7 Sustainability implications

- 5.7.1 Relevant sustainability implications will depend on the product but can include air quality, circular economy compatibility, water and energy consumption, whole life carbon emissions, and climate change adaptation compatibility.
- 5.7.2 The level of effort associated with assessing sustainability implications should be proportionate, e.g. where several suitable products have been identified
- 5.7.3 Non-technical aspects such as social value and ethical sourcing are addressed through procurement controls and not via this standard.

5.8 Plant Acceptance

- 5.8.1 The requirements for acceptance of Engineering Plant are substantially aligned with this Standard, with the primary exception that a separate register is maintained; details of Engineering Plant are not held within the Product Information Register..
- 5.8.2 Plant Acceptance requirements are defined in standards [S1171](#), [S1172](#), [S1173](#) and [S1174](#).

5.9 Future/Innovative products

- 5.9.1 Information about future/innovative products will not be included in the Product Information Register unless a Product Sponsor has been identified and a business decision has been made to commit to a test/trial (section 3.7 refers).
- 5.9.2 A list of potentially valuable innovations and innovators is held by the Innovation Directorate.

5.10 Procurement, Commercial and Legal

- 5.10.1 The requirements for engineering assessment of products defined in this standard apply in conjunction with procurement, legal and commercial requirements defined elsewhere. Engage a procurement representative at an early stage when intending to purchase products.
- 5.10.2 Some products are subject to Category Management, i.e. there is a default presumption that products in the categories concerned will be procured from a particular supplier or group of suppliers.

5.11 Organisational Information Requirements

- 5.11.1 The concept of Organisational Information Requirements (OIRs) is briefly described in BS EN 19650 Part 1. OIRs define the business requirements for the information needed to answer or inform high-level strategic objectives.

5.11.2 OIRs have not been formally defined at corporate level within TfL, however Table 4 defines the OIRs which have been identified as being within scope of this Standard.

Topic	Examples of Organisation Information Requirements	Source
Asset Strategy	Products to be selected in line with the agreed Asset Strategy.	Asset Strategies
Sustainability	Information about whole life carbon emissions and energy consumption of the products selected". Requirements for carbon modelling. Carbon Management process	Corporate Environment Plan SHE Management System
Component availability and obsolescence.	Circular economy requirements e.g. capture information about ability to refurbish products at end of life, or re-purpose for re-use elsewhere as preferred disposal options. Obsolescence considerations e.g. future upgrade path	Business Planning/ Asset Management best practice Obsolescence Management Plan in Pathway
Uniclass2015 code and description	Record the associated Uniclass code in order to support digital information management	Transforming Infrastructure Performance Roadmap: Information Management Mandate
Category Management	Selection of products covered by Category Management from the agreed frameworks, or justification agreed with commercial representative where this is not the case.	Procurement policies and framework contracts

Table 4 Organisational Information Requirements in scope of this Standard

6 Person accountable for this document

Name	Job title
John Park	Principal Engineering Leader, Digital Engineering

7 Definitions

Term	Definition	Source
Category Management	A purchasing concept in which the range of products purchased by a business organisation is broken down into discrete groups of similar or related products; these groups are known as product categories	Jargon Buster
Controlled Products	All products covered by the categories in R0704 London Underground Controlled Products List. TfL requires to authorise these products for use in a specific application, because a) their application is critical to safety or reliability; or b) they are being manufactured to a TfL design; or	Jargon Buster

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	<p>c) consistency of 'look and feel' is an essential requirement e.g. branded or heritage items.</p> <p>Assessment may include consideration of in-service experience, review of manufacturing processes or tests undertaken independently from the manufacturer.</p> <p>A Designer wishing to use a product covered by the category of Controlled Products confirms that the product is authorised in accordance with section 3.4 prior to purchase of the product.</p>	
Controlled Products List	R0704 London Underground Controlled Products List. This is the document which defines the categories of products which are required to be treated as Controlled Products for the purpose of this standard.	Jargon Buster
Designer	As defined in the CDM Regulations, being “any person (including a client, contractor or other person referred to in these Regulations) who (a) prepares or modifies a design; or (b) arranges for, or instructs any person under their control to do so” – i.e. it is intended to apply to any person or organisation responsible for making the product selection decision.	Jargon Buster
Designated Standard	A standard adopted by a recognised standardisation body (e.g., BSI), in part or in full, by publishing its reference on GOV.UK in a formal notice of publication. The standard may be used towards the presumption of conformity with applicable UK regulations.	Jargon Buster
Fire Safety of Materials Compliance Certificate	A certificate which records that the product has been assessed as compliant with the relevant fire standards and identifies any conditions from a fire safety perspective.	Jargon Buster
London Underground Network	The railway which is served by London Underground services together with all supporting infrastructure, excluding assets owned by Network Rail.	Jargon Buster
Product	Physical products used on the railway, including components, assemblies, embedded software and firmware – but excluding products in the categories listed in section 2.3	Jargon Buster
Product Assessment Information	Evidence of the rationale for selection of all products used. This can be a standalone document, or may alternatively be included within assurance submissions or a system safety case structure.	Jargon Buster
Product Change	Any of the following: The introduction of new Products	Jargon Buster

	<p>Changes to the design, use or maintenance of Products</p> <p>Changes to embedded software or firmware</p> <p>Changes to the materials or manufacturing process used in the supply of Products</p> <p>Changes of manufacturer or location of manufacture</p> <p>Trials or testing of new Products on the railway infrastructure</p>	
Repeatable Products	<p>Products that TfL chooses to authorise for use in a specific application where TfL is the party selecting the product and the application is repeatable.</p> <p>A Designer may choose to select another product provided that the product is assessed in accordance with section 3.1 prior to purchase of the product.</p>	Jargon Buster
Replacement Products	<p>Products being selected to replace part of an existing system, not normally as part of a project.</p> <p>An engineer selecting a product may choose to select a product not currently on the PIR provided that the product is assessed in accordance with section 3.4 prior to purchase of the product.</p>	Jargon Buster

8 Abbreviations

Abbreviation	Meaning
ALARP	As Low As Reasonably Practicable
BS	British Standards
BSI	British Standards Institution
CDM	Construction (Design & Management)
CE	Conformité Européenne
COTS	Commercial Off The Shelf
CRS	Change to Rolling Stock
DoC	Declaration of Conformity
EU	European Union
OIR	Organisational Information Requirements
PIR	Product Information Register
SHE	Safety, Health & Environment
UKCA	UK Conformity Assessed

9 References

9.1 Statutory Documents

Document no.	Title or URL
	Fire Precautions (Sub-surface Railway Stations) England Regulations 2009
	Building Safety Act 2022

SI 2016 No.1091	The Electromagnetic Compatibility Regulations 2016, (as amended)
SI 2016 No.588	The Control of Electromagnetic Fields at Work Regulations 2016
SI 2017 No.1206	The Radio Equipment Regulations 2017, (as amended)
SI 2016 No.1101	The Electrical Equipment (Safety) Regulations 2016
SI 1989 No.635	The Electricity at Work Regulations 1989
SI 2008 No.1597	Supply of Machinery (Safety) Regulations 2008
SI 2016 No.1093	The Lifts Regulations 2016, (as amended)
SI 2001 No.1701	Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001, (as amended)
SI 2005 No.1803	General Product Safety Regulations 2005
SI 2012 No.3032	Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

9.2 British & International Standards

Document no.	Title or URL
BS6853	Fire Test to Railway Components
BS 7671:2018	“Requirements for Electrical Installations - The IET Wiring Regulations Eighteenth Edition, IET, 2018, UK.
BS9992	Fire safety in the design, management and use of rail infrastructure - Code of practice
BS ISO 10303	STEP Standard for Product Data Exchange
BS ISO 12006-2	Building Construction – Organisation of Information
ISO 14025	Environmental labels and declarations – Type III environmental declarations – Principles and procedures
ISO 15804	Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
ISO 15926	Industrial automation systems and integration – Integration of life-cycle data for process plants.
BS EN 19650-1	Building Information Modelling
BS EN 45545	Railway applications: Fire prevention on railway vehicles

9.3 LU company documents

Document no.	Title or URL
S1085	Fire Safety Performance of Materials - Stations and Tunnel Infrastructure
S1171	All Plant – Acceptance, Use and Maintenance
S1172	On Track Machines – Design and Acceptance
S1173	On Track Plant – Design and Acceptance
S1174	Non-Railborne Plant – Design and Acceptance
S1180	Standard for Rolling Stock
S1222	Electromagnetic Compatibility
S1538	Assurance
R0704	London Underground Controlled Products List

PR0124	Managing Permanent Way Items in the Approved Products Register
G1100	Change to Rolling Stock Guidance Document

9.4 Other documents

Document no.	Title or URL
	Independent Review of Building Regulations and Fire Safety led by Dame Judith Hackitt

9.5 TfL Intranet pages

Title	URL
Reducing whole life cost and whole life carbon at TfL	https://transportforlondon.sharepoint.com/sites/ceep
Energy and Carbon Management	https://transportforlondon.sharepoint.com/sites/instructions-and-guidance-she/SitePages/Energy-and-Carbon-Management.aspx
TfL Pathway carbon pages	https://transportforlondon.sharepoint.com/sites/PathwayHub/SitePages/Carbon-Management.aspx

10 Document history

Issue no.	Date	Changes	Author
A1	February 2010	First issue	Jon Jones
A2	September 2013	Revised to incorporate the full Product assessment process and updated requirements for registration. Also, change to the title (previously titled "Registration of Products") as per DRACCT No. 02051.	John Park
A3	December 2023	Substantially rewritten to include requirements for product selection and to clarify the scope and application of the Product Information Register. Change No. CR-18235.	Andy Gordon