

# RIIO-ED2 Engineering Justification Paper (EJP)

# Asbestos Management

Investment Reference No: 327\_SSEPD\_NLR\_ASBESTOS



# Contents

In	vestme	ent Summary Table	3
1	Exe	cutive Summary	4
2	Intr	oduction	5
3	Вас	kground Information	6
	3.1	Control of Asbestos Regulations (CAR) 2012 Overview	6
	3.2	Our Historic Investments	
	3.3	Our Obligation	
	3.4	Asbestos Surveys	
	3.5	Management of Asbestos	
	3.6	Re-inspections	
		·	
	3.7	Signage	
4		estment Drivers	
5		ceholder Engagement	
6	Det	ailed Analysis	12
	6.1	Volumes	12
	6.2	Costs	13
	6.3	Deliverability of Proposed Volumes	15
7	Con	clusion	16
Α	ppendi	c 1 Acronym Glossary	17
		x 2 Relevant Policy, Standards, and Operational Restrictions	
		x 3 Photos of Areas Found to Contain Asbestos	
		Figures	13
		Examples of ACM (Flashguards inside Electrical Boxing and Cable Wrap	7
	_	No. of Asbestos Annual Re-Inspections - SEPD	
	_	No. of Asbestos Annual Re-Inspections – SHEPD	
	_	Cleared of Asbestos (Left), ACM Warning Sign (Centre) & Containing Asbestos (Right)	
		RIIO-ED2 Volumes – Asbestos Management SEPD	
	_	RIIO-ED2 Expenditure – Asbestos Management SEPD	
	_	RIIO-ED2 Expenditure – Asbestos Management SHEPD	
Ta	able of	Tables	
Τá	able 1:	nvestment Summary	3
		SEPD Asbestos Management CV14 RIIO-ED2 Volumes	
		SHEPD Asbestos Management CV14 RIIO-ED2 Volumes	
		SEPD Asbestos Management CV14 RIIO-ED2 CostsSHEPD Asbestos Management CV14 RIIO-ED2 Costs	
10	יים אות איני	THE PASSESTOS INIGHAS ENTERN CATA VIIO-EDS COSTS	тэ

# **Investment Summary Table**

Table 1 below provides a high level summary of the key information relevant to this Investment Decision Pack (IDP) and the strategy and cost and volumes for Asbestos Management.

Table 1: Investment Summary

Name of Programme	Asbestos									
Primary Investment Driver	Legal & Sa	Legal & Safety								
Investment Reference	327_SSEPE	_NLR_ASBE	STOS							
Output Reference	Asbestos									
Cost	£3.2m									
Delivery year	RIIO-ED2									
Reporting Table	The following Cost and Volume (CV) table correlate to the primary inv drivers for the asset category covered by the IDP:  • CV14: Legal & Safety									
Outputs included in RIIO-ED1 Business Plan	No									
	Licence Area	E	ED1		02	EC	)3+			
<b>Spend Apportionment</b>	SEPD	-		1.93		-				
	SHEPD		-	1.	27	-				
RIIO-ED2 Spend (£m) – Asbestos Management										
CV14 Legal & Safety	Licence Area	2024	2025	2026	2027	2028	Total			
RIIO-ED2 Spend Profile (£m)	SEPD	0.39	0.39	0.39	0.38	0.38	1.93			
	SHEPD	0.26	0.26	0.25	0.25	0.25	1.27			

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# 1 Executive Summary

Our **Safe and Resilient (Annex 7.1)** sets out the methodology used to determine the non-Load baseline for capital expenditure. The primary driver for this category is safety. This paper identifies the need to provide a baseline to allow us to manage asbestos during RIIO-ED2.

This Engineering Justification Paper (EJP) sets out the basis for the required level of expenditure for our Asbestos Containing Material (ACM) during the RIIO-ED2 Distribution Price Control period.

Asbestos or ACM can be found in any industrial or residential building built or refurbished before the year 2000. It is in many of the common materials used in the building trade. If asbestos is in good condition and is not disturbed or damaged, then there is negligible risk. If disturbed or damaged, asbestos can become a danger to health as fibres released into the air can be breathed in.

The management process ensures compliance with Control of Asbestos Regulations (CAR) 2012 and the safety of our assets, staff and members of the public. The Primary Investment Driver described within this paper is driven by the Health and Safety Executive (HSE) and Electricity Safety, Quality and Continuity Regulations (ESQCR) commitments to ensure the safety of the public and our staff is maintained.

The cost to deliver the preferred solution is £3.2m and the works are planned to be completed throughout the RIIO-ED2 regulatory period.

## 2 Introduction

Asbestos or Asbestos Containing Material (ACM) can be found in any industrial or residential building built or refurbished before the year 2000. It is in many of the common materials used in the building trade. If asbestos is in good condition and is not disturbed or damaged, then there is negligible risk. If disturbed or damaged, asbestos can become a danger to health as fibres released into the air can be breathed in.

This Engineering Justification Paper (EJP) describes our proposed non-load related investment plan for the management of our ACM as per the Control of Asbestos Regulations (CAR) 2012 during RIIO-ED2. The primary driver considered within this paper is Legal and Safety.

Section 3 provides the high-level background information for this investment, describing key legislation, what our historic investments have been, what our obligations are and how we manage ACM.

Section 4 establishes an overview of our primary driver, legal and safety, associated with this investment category.

Section 5 sets out how the chosen RIIO-ED2 investment strategy has been informed through our stakeholder engagement activities.

Section 6 provides detailed analysis confirming the volumes of ACM we plan to manage throughout RIIO-ED2, the associated costs of inspecting, maintaining and removing ACM, and the deliverability of the plan with respect to our ability to carry out the activities indicated within this paper during RIIO-ED2 for the cost allowance requested.

Section 7 concludes the EJP and confirms the overall strategy that we plan to drive during RIIO-ED2 to manage ACM to meet legislation and ensure our staff and members of the public are safe.

Supplementary Appendices are provided. These include a Table of Acronyms, relevant internal standards and an Appendix which provides examples of ACM that are on our network.

# 3 Background Information

This section of the EJP provides background information on our Asbestos Containing Material (ACM) strategy. This includes a description of the key legislation, our historic investments, obligations and how we manage ACM. All of which has informed our RIIO-ED2 investment strategy.

#### 3.1 Control of Asbestos Regulations (CAR) 2012 Overview

In April 2012 the Control of Asbestos Regulations (CAR) 2012 came into force. The 'duty to manage' asbestos included in the regulations states the following:

- Find out if there is asbestos in the premises (or assessing if ACMs are liable to be present and making
  a presumption that materials contain asbestos, unless you have strong evidence that they do not), its
  location and what condition it is in;
- Make and keep an up-to-date record of the location and condition of the ACMs or presumed ACMs in your premises;
- Assess the risk from the material;
- Prepare a plan that sets out in detail how you are going to manage the risk from this material;
- Take the steps needed to put your plan into action;
- Review and monitor your plan and the arrangements made to put it in place; and
- Set up a system for providing information on the location and condition of the material to anyone who is liable to work on or disturb it.

#### 3.2 Our Historic Investments

The issue of Control of Asbestos Regulations (CAR) 2012 narrowed the types of work to which the exemptions applied and we were unable to carry out certain types of low risk, short duration work. This therefore meant more works were notifiable, significantly increasing the time and cost to us and as a result, we had to contract works out to specialist licensed contractors, including carrying-out enhanced surveying of sites.

The high expenditure during the DPCR5 control period was required to ensure full and compliant management in relation to the CAR 2012. During this period, we were fully reliant on contractors to carry out the various asbestos management surveys which had significant cost implications. The reduction in cost since DPCR5 is due to the cost of re-inspection being much lower than the initial asbestos management surveys carried out. During the RIIO-ED1 period, we have had personnel who have been trained to carry out the re-inspections and this has significantly reduced the overall cost.

## 3.3 Our Obligation

We have an obligation to adhere to the Control of Asbestos Management Regulations 2012 and has included this in its policies and procedures. We have written a comprehensive procedure, (i.e., reference PR-NET-OCH-002: Management of Asbestos) which sets out how we will identify, control, maintain and manage the risk associated with asbestos and ACM.

# This applies to:

- All substations, operational buildings, and stores or other buildings owned, leased or managed by SSEN:
- Any items of equipment which may contain ACMs (i.e., fuses, phase separators, housing, heaters, etc);
- All activities undertaken by our employees, or contractors working on behalf of us; and
- Buildings (Internal and external walls).

We have found asbestos in the following areas (please see additional photos in Appendix 3):

- Roofs and Ceilings;
- Henley and AEI outdoor LV Pillars;
- Cable ducts;
- Debris on the ground;
- Dumped at substation sites by a third party;
- Insulation board panels; and
- Thermal Insulation.





Figure 1: Examples of ACM (Flashguards inside Electrical Boxing and Cable Wrap

This Engineering Justification Paper (EJP) sets out the basis for the required level of expenditure for our sites that contains ACM during the RIIO-ED2 Distribution Price Control period. The management process ensures compliance with CAR 2012 and the safety of our assets, staff and members of the public.

#### 3.4 Asbestos Surveys

Asbestos management surveys have been carried out on all pre-2000 sites by a competent, appointed and licensed third-party contractor in order to ensure that any asbestos or ACMs are appropriately managed during normal occupation and use of an asset.

Demolition and Refurbishment Surveys are undertaken where more intrusive work is required on an asset or part of an asset and may also be required as part of any pre-construction information under the Construction Design and Management Regulations 2015 (CDM 2015). These surveys are only undertaken where intrusive and or destructive works are to be undertaken.

Survey reports are provided by the competent third-party assessor in a format agreed by us and in compliance with current legal standards and HSG 264. This contains a material and priority score and will show photographic evidence of all identified or presumed ACMs in such detail as to allow the photographs to be used to carry out routine ACM inspections.

Our survey records are retained on the asset management system appropriate to the business area to which the asset belongs. A hard copy is retained on site for any operational business location including indoor substations, properties or stores etc. These form part of the management plan for the site. Survey records are reviewed on an annual basis or earlier where the condition of ACMs dictates necessary or where work activities or situation changes arise.

#### 3.5 Management of Asbestos

We have developed a management plan for all areas which do, or may, contain asbestos. These plans have been incorporated in all documentation relating to the inspection and maintenance of buildings, plant and equipment. The management plan ensures that:

- The condition of ACMs is monitored for deterioration;
- ACMs are kept in a good state of repair;
- Based on their condition or location, ACMs are repaired or removed;
- · Emergency arrangements are in place; and
- Information on the location and condition of the material is given to anyone who is potentially at risk.

## 3.6 Re-inspections

Assets that are subject to an asbestos management plan will be added to the relevant electronic management system for the business area and will be marked as 'Asbestos on Site.' Any ACM identified, whether presumed or confirmed, will be visually inspected on at least an annual basis or earlier where the management plan requires or where circumstance has changed in line with CAR 2012 regulations. All personnel undertaking such inspection will have relevant asbestos training such as P.405 Management of Asbestos in Buildings qualification.

The number of sites that are identified as having ACM at the start of ED2 are shown in Figure 2 and Figure 3.

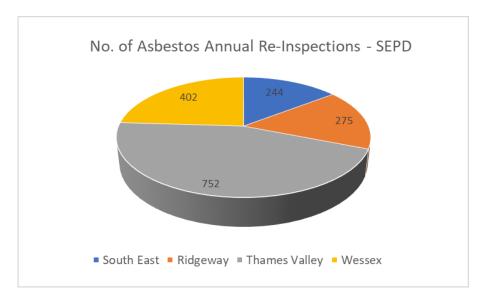


Figure 2: No. of Asbestos Annual Re-Inspections - SEPD

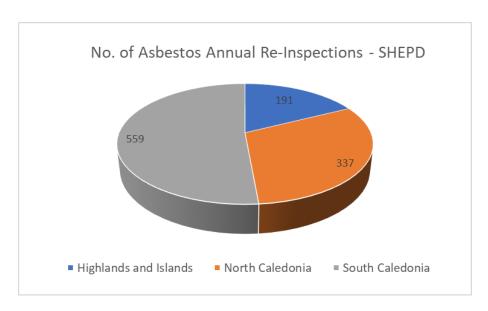


Figure 3: No. of Asbestos Annual Re-Inspections – SHEPD

## 3.7 Signage

Substation sites operating at LV to 132kV which are identified as having or are believed to have Asbestos or ACMs will be fitted with labels and information holders. In sites where it has been established no asbestos is present or the ACMs have been completely removed, a green label is displayed.

On sites where asbestos is present or suspected, a yellow asbestos sticker is fitted to the outside of the external doors accessible to the public. A red label is displayed on the main access doors. Examples of Asbestos warning signs are shown below.



Figure 4: Cleared of Asbestos (Left), ACM Warning Sign (Centre) & Containing Asbestos (Right)

#### 4 Investment Drivers

The Primary Investment Driver described within this paper is driven by the Health and Safety Executive (HSE) and Electricity Safety, Quality and Continuity Regulations (ESQCR) commitments to ensure the safety of the public and our staff is maintained.

To prevent staff and others coming into contact with asbestos, we ensure risks to persons are effectively assessed and all control measures are in place before any works commence. This involves gathering information, both on the inspections and asbestos register. A detailed work plan must then be formulated to create a method statement and the information should be communicated to all persons on site. Our staff will not perform 'licensed' work activities and, where this work is required, a specialist third party licensed contractor will be employed. Where 'non-licensed' work is undertaken the work plan will identify whether the work is notifiable to the HSE before any work commences.

The primary investment driver described above correlates to the following Cost and Volumes (CV) table within the RIIO-ED2 Business Plan Data Tables (BPDT).

• **CV14 – Legal & Safety:** The safe management and removal of ACM.

# 5 Stakeholder Engagement

In preparation for our RIIO-ED2 business plans several stakeholder engagement exercises have been undertaken to better understand what will be important to our network customers during RIIO-ED2 and to ensure the views of our stakeholders are reflected in the cost and volumes we are proposing for each asset category in line with our *Enhanced Engagement (Chapter 3)*.

Below is a summary of the key outcomes from this engagement from some of our critical stakeholders. The summary below provides details of our stakeholder feedback on our *Safe and Resilient (Annex 7.1)* and their views on the importance of improving network reliability.

#### **Consumer Feedback**

- 88% of stakeholders in SEPD and 72% in SHEPD either agreed or strongly agreed with our asset management proposal to target assets with the highest probability of failure for ED2.
- 71% consumers thought it was very important we are committed to reliability, which was the second highest priority for them (after affordability).
- In terms of reliability, domestic and SME customers' top priorities were 'Restoring the electricity supply as quickly as possible in the event of a power cut' (particularly for those aged 65+ or in vulnerable situations) and 'Keeping my power on with minimal power cuts'.

## **Local Authority and Government**

- Stakeholders strongly urged us to strike a balance between maintain a reliable network by simply fixing
  older assets now and replacing assets (at a higher cost now) so that the network is ready for future
  use.
- SSEN needs to ensure reliability and disruptions are minimised, suggesting proactive actions such as providing generators during bad weather and new technologies to 'master' the network.
- Resilience partnerships are a good start for mitigating issues.

#### **Community Energy Groups and Interest Groups**

- Both old and new communities need to be resilient must ensure the transition does not leave people behind.
- SSEN needs to think about current and future populations in areas now in order to plan its investments most effectively.

## **Summary of Findings**

A wide range of stakeholders confirmed that they strongly support our proposed approach of prioritising assets with a higher likelihood of failure as part of *Safe and Resilient* (*Annex 7.1*). In addition, stakeholders also highlighted that network reliability was a high priority, greater than sustainability but below value for money.

Stakeholders communicated that reliability is expected as they depend on electricity for so many things in everyday life, and this is increasing, for example, with more households working from home and the electrification of heating and transport. These expectations and views validate Ofgem's IIS targets and Guaranteed Standards, so on this basis we have set our ambition to meet these levels of network performance.

# 6 Detailed Analysis

This section of the report provides further detail on the investment strategy that we have designed for managing ACM during RIIO-ED2.

#### 6.1 Volumes

We propose a forecast of total capital delivery through a proactive programme of works.

As described in HSE: Managing Asbestos in Buildings, "the time between inspections will depend on the type of material, where it is and its condition, but it should be at least every six to 12 months." We therefore propose that an average of 1,657 substations will be inspected per annum in SEPD and an average of 1,075 substations will be inspected per annum in SHEPD during the RIIO-ED2, as shown in Figure 5 and Figure 6. Note the small reduction over the ED2 period by approximately 2% is due to major refurbishments where old switch rooms are demolished, and new ones are built.

Not all asbestos removed has originated from site, for example, fly-tipped asbestos waste may be dumped on our sites, but of course, this does not impact on the number of inspections carried out. We are continually working to make sure volumes are accurately recorded in the Asset System and further emphasis and focus will be put on correct allocation of cost and volumes during RIIO-ED2.

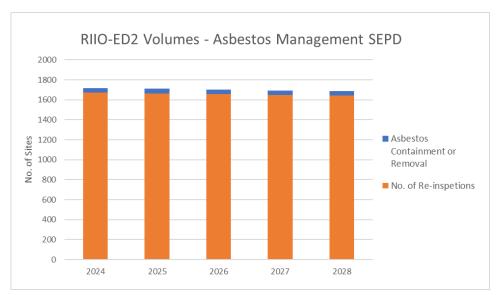


Figure 5: RIIO-ED2 Volumes – Asbestos Management SEPD

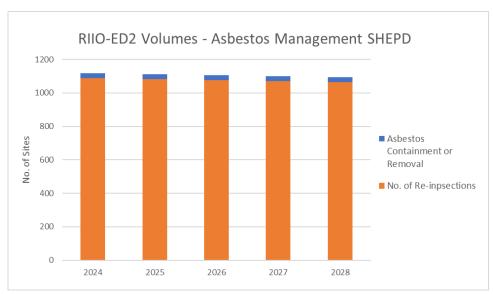


Figure 6: RIIO-ED2 Volumes – Asbestos Management SHEPD

Asbestos is not removed unnecessarily as removing ACM can cause more risk than leaving it in situ. Based on its condition and likelihood of whether it will be damaged or disturbed, the decision to repair or remove will be made on an asset-by-asset basis. For ED2, we have used the current ED1 delivery of asbestos containment/removal to ensure continued compliance with the CAR 2012 and feedback from trained Asbestos inspectors on sites likely to require intervention during RIIO-ED2.

Actual and forecasted volumes are provided within the CV14 Legal and Safety cost and volume table.

## 6.2 Costs

The unit rate has been derived from cost-based analysis of inspections completed during RIIO-ED1. During the RIIO-ED1 period, we have had in-house personnel who have been trained to carry out the re-inspections and this has significantly reduced the overall cost with an average re-inspection costing approximately £125 / site.



Figure 7: RIIO-ED2 Expenditure – Asbestos Management SEPD



Figure 8: RIIO-ED2 Expenditure – Asbestos Management SHEPD

Damaged asbestos can be made safe by repairing it and either sealing or enclosing it to prevent further damage. Most work with asbestos needs to be done by a licensed contractor, i.e., someone trained and competent to carry out the task. The unit rate for asbestos containment/removal can range from £300 for the removal of asbestos found and the encapsulation of a flue, to £25,000 for the removal of asbestos and a roof replacement. Our ED2 proposal is based on the current delivery of asbestos containment/removal during the ED1 period. Table 2 to Table 5 provides the breakdown of volumes and cost for the RIIO-ED2 control period.

Table 2: SEPD Asbestos Management CV14 RIIO-ED2 Volumes

Licence Area	Asset Category	Unit	2024	2025	2026	2027	2028	Total
SEPD	Asbestos management - surveys & signage	#	1,673	1,665	1,657	1,649	1,641	8,285
SEPD	Asbestos management - containment or removal	#	46	46	46	46	46	230
Total		#	1,719	1,711	1,703	1,695	1,687	8,515

Table 3: SHEPD Asbestos Management CV14 RIIO-ED2 Volumes

Licence Area	Asset Category	Unit	2024	2025	2026	2027	2028	Total
SHEPD	Asbestos management - surveys & signage	#	1,087	1,081	1,075	1,069	1,063	5,375
SHEPD	Asbestos management - containment or removal	#	30	30	30	30	30	150
Total		#	1,117	1,111	1,105	1,099	1,093	5,525

Table 4: SEPD Asbestos Management CV14 RIIO-ED2 Costs

Licence Area	Asset Category	Unit	2024	2025	2026	2027	2028	Total
SEPD	Asbestos management - surveys & signage	£m						
SEPD	Asbestos management - containment or removal	£m						
	Total	£m	0.39	0.39	0.39	0.38	0.38	1.93

Table 5: SHEPD Asbestos Management CV14 RIIO-ED2 Costs

Licence Area	Asset Category	Unit	2024	2025	2026	2027	2028	Total
SHEPD	Asbestos management - surveys & signage	£m						
SHEPD	Asbestos management - containment or removal	£m						
	Total	£m	0.26	0.26	0.25	0.25	0.25	1.27

## 6.3 Deliverability of Proposed Volumes

Between our draft and final Business Plans we have carried out a more detailed deliverability assessment of our overall plan as a package and its component investments. Using our draft Business Plan investment and phasing as a baseline we have followed our deliverability assessment methodology. We have assessed any potential delivery constraints to our plan based on:

- In-house workforce capacity and skills constraints based on our planned recruitment and training profile and planned sourcing mix as well as the efficiencies we have built into our Business Plan (detailed in *Ensuring Deliverability and a Resilient Workforce (Chapter 16)*.
- Assessment of the specific lead and delivery timelines for the asset classes in our planned schemes
- We have evaluated our sourcing mix where there were known delivery constraints to assess opportunities to alleviate any constraints through outsourcing
- We have engaged our supply chain (detailed in *Ensuring Deliverability and a Resilient Workforce* (*Chapter 16*) to explore how the supply chain could support us to efficiently deliver greater volumes
   of work and how we could implement a range of alternative contracting strategies to deliver this
- We have also engaged with the supply chain on the delivery of work volumes that sit within
  Uncertainty Mechanisms to ensure we have plans in place to deliver this work if and when the need
  arises
- We have assessed the synergies between our planned load, non-load and environmental investments to most efficiently plan the scheduling of work and minimise disruption to consumers
- Based on our assessment of delivery constraints and potential solutions to resolve them, we have revised our investment phasing accordingly to ensure our Business Plan is deliverable, meets our consumers' needs and is most cost efficient for our consumers

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#### 7 Conclusion

The purpose of this Engineering Justification Paper (EJP) has been to describe the overarching investment strategy that we intend to take during RIIO-ED2 for the management of asbestos. The management process ensures compliance with CAR 2012 and the safety of our assets, staff and members of the public

We have an obligation to adhere to the Control of Asbestos Management Regulations 2012 and has included this in its policies and procedures. We have written a comprehensive procedure, (i.e., reference PR-NET-OCH-002: Management of Asbestos) which sets out how we will identify, control, maintain and manage the risk associated with asbestos and ACM. This applies to:

- All substations, operational buildings, and stores or other buildings owned, leased or managed by SSEN;
- Any items of equipment which may contain ACMs (i.e., fuses, phase separators, housing, heaters, etc):
- All activities undertaken by our employees, or contractors working on behalf of us; and
- Buildings (Internal and external walls).

To prevent staff and others coming into contact with asbestos, we ensure risks to persons are effectively assessed and all control measures are in place before any works commence. This involves gathering information, both on the inspections and asbestos register. A detailed work plan must then be formulated to create a method statement and the information should be communicated to all persons on site. Our staff will not perform 'licensed' work activities and, where this work is required, a specialist third party licensed contractor will be employed. Where 'non-licensed' work is undertaken the work plan will identify whether the work is notifiable to the HSE before any work commences.

Actual and forecasted volumes are provided within the CV14 Legal and Safety cost and volume table. We propose a forecast of total capital delivery through a proactive programme of works. An average of 1,657 substations will be inspected per annum in SEPD and an average of 1,075 substations will be inspected per annum in SHEPD during the RIIO-ED2. Asbestos is not removed unnecessarily as removing ACM can cause more risk than leaving it in situ. Based on its condition and likelihood of whether it will be damaged or disturbed, the decision to repair or remove will be made on an asset-by-asset basis. We have used the current ED1 delivery of asbestos containment/removal to ensure continued compliance with the CAR 2012 during RIIO-ED2.

This investment represents a total spend of £3.2m and the works are planned to be completed average an annual spend of £640k throughout the ED2 regulatory period.

# **Appendix 1 Acronym Glossary**

Acronym	Description			
ACM	Asbestos Containing Materials			
BPDT	Business Plan Data Table			
CAR 2012 Control of Asbestos Regulations 2012				
CDM 2015	Construction Design and Management Regulations 2015			
CV14	Legal & Safety Cost and Volume Table			
DPCR5	Distribution Price Control Review 5 (2010-15)			
EJP	Engineering Justification Paper			
ESQCR	Electricity Safety, Quality and Continuity Regulations			
HSE	Health and Safety Executive			
IDP	Investment Development Pack			
LV	Low Voltage			
RIIO-ED1	Distribution Price Control Review (Electricity Distribution 1) 2015-23			
RIIO-ED2	Distribution Price Control Review (Electricity Distribution 2) 2023-28			
SSEN	Scottish and Southern Electricity Networks			

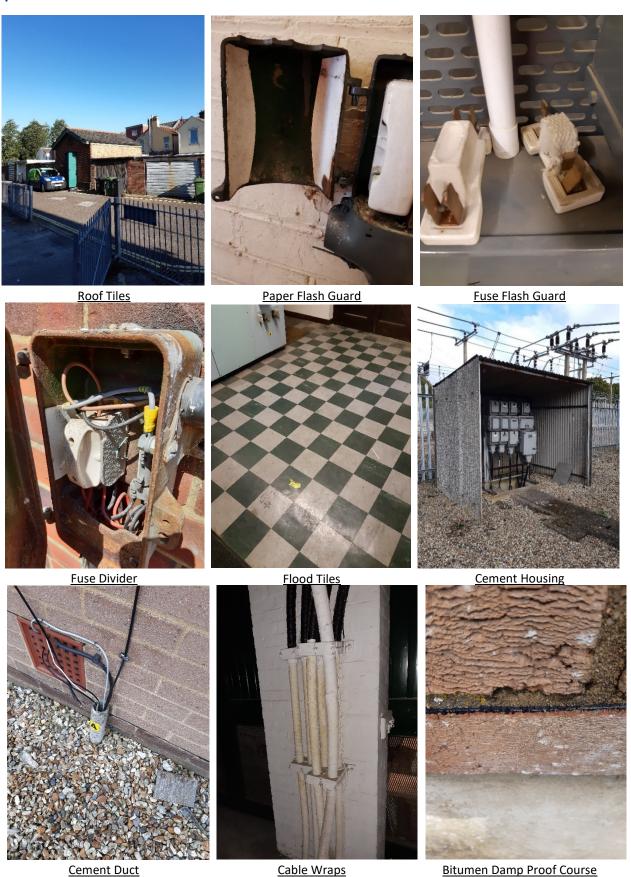
# **Appendix 2 Relevant Policy, Standards, and Operational Restrictions**

The policies, manuals and standards and operational restrictions which govern the management of Asbestos are listed below in Table 6.

Table 6: Asbestos Management Relevant Documents

Policy Number	Policy Name / Description					
<u>Internal</u>						
PR-NET-OCH-002 Management of Asbestos						
External						
SI 2012: 632	The Control of Asbestos Regulations 2012					
HSG 264	Asbestos: The Survey Guide					
HSG 227	A Comprehensive Guide to Managing Asbestos in Premises					
INDG 223	Managing Asbestos in Buildings					
A0	Introduction to Asbestos in Buildings					
EM0	Asbestos Essentials: Risk Assessments and Plans of Work					
EM2	Asbestos Essentials: Information, Instruction and Training					
EM9	Asbestos Essentials: Disposal of Asbestos Waste					

# **Appendix 3 Photos of Areas Found to Contain Asbestos**





Cement Ceiling



Panels to Concrete Structures



Gasket inside Light



Wrap to Cable



Flashguards inside Electrical Boxing



Fire Alarm to Wall



Floor Tiles



**Light Fitting - Ceiling** 



Electrical Box - Wall



**Electrical Light to Ceiling** 



Panels inside Fire Door



Residue around Air Vent

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