AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 23.2 IAQM Construction Assessment

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

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CONTENTS

TABLES

APPENDIX 23.2 IAQM CONSTRUCTION ASSESSMENT

1.1. INTRODUCTION

1.1.1.1. This technical appendix presents a summary of the underlying methodology used to assess the risk of fugitive emissions of dust and air emissions on human health and ecology at the ten Route Sections, a summary of the assessed risk and proposed commensurate mitigation measures. The methodology follows the Institute of Air Quality Managment Guidance on the assessment of dust from demolition and construction published in 2016.

1.2. METHODOLOGY

1.2.1. STEP 1 – SCREENING THE NEED FOR A DETAILED ASSESSMENT

1.2.1.1. An assessment will normally be required where there are:

- 'Human receptors' within 350 m of the site boundary; or within 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s); and/or
- 'Ecological receptors' within 50 m of the site boundary; or within 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

1.2.1.2. Where the need for a more detailed assessment is screened out, it can be concluded that the level of risk is "negligible".

1.2.2. STEP 2A – DEFINE THE POTENTIAL DUST EMISSION MAGNITUDE

1.2.2.1. Table 1 provides examples of how the potential dust emission magnitude for different activities can be defined. (Note that not all the criteria need to be met for a particular class). Other criteria may be used if justified in the assessment.

Table 1 – IAQM Table 2A: Examples of Human Receptor Sensitivity to Construction Phase Impacts

Dust Emission Magnitude	Activity
Large	Demolition

Dust Emission Magnitude	Activity
	>50,000 m^3 building demolished, dusty material (e.g. concrete), on-site crushing/screening, demolition >20 m above ground level
	Earthworks >10,000 m^2 site area, dusty soil type (e.g. clay), >10 earth moving vehicles active simultaneously, >8m high bunds formed, >100,000 tonnes material moved
	Construction >100,000 m^3 building volume, on site concrete batching, sandblasting
	Trackout >50 HDVs out / day, dusty surface material (e.g. clay), >100 m unpaved roads
Medium	Demolition 20,000-50,000 m^3 building demolished, dusty material (e.g. concrete) 10-20 m above ground level
	Earthworks 2,500-10,000 m^2 site area, moderately dusty soil (e.g. silt), 5-10 earth moving vehicles active simultaneously, 4m-8m high bunds, 20,000 -100,000 tonnes material moved
	Construction 25,000-100,000 m^3 building volume, dusty material e.g. concrete, on site concrete batching
	Trackout 10-50 HDVs out / day, moderately dusty surface material (e.g. clay), 50 -100 m unpaved roads

Dust Emission Magnitude	Activity
Small	Demolition <20,000 m^3 building demolished, non-dusty material (e.g. metal cladding), <10 m above ground level, work during wetter months
	Earthworks <2,500 m^2 site area, soil with large grain size (e.g. sand), <5 earth moving vehicles active simultaneously, <4m high bunds, <20,000 tonnes material moved, earthworks during wetter months
	Construction <25,000 m^3, non-dusty material (e.g. metal cladding or timber)
	Trackout <10 HDVs out / day, non-dusty soil, < 50 m unpaved roads

1.2.3. STEP 2B – DEFINE THE SENSITIVITY OF THE AREA

1.2.3.1. Tables 2 - 4 are used to determine the sensitivity of the area to dust soiling, human health and ecological impacts respectively. The guidance defines the sensitivity of individual receptors to dust soiling and health effects to assist in the assessment of the overall sensitivity of the study area.

Table 2 – IAQM Table 2Ba: Sensitivity of the Area to Dust Soiling Effects

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table 3 – IAQM Table 2Bb: Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM_{10} Concentration ($\mu g/m^3$)	Number of Receptors	Distance from the Source (m)				
			<20	<50	<100	<200	<350
High	>32	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	>32	>10	High	Medium	Low	Low	Low

Receptor Sensitivity	Annual Mean PM_{10} Concentration ($\mu g/m^3$)	Number of Receptors	Distance from the Source (m)				
			<20	<50	<100	<200	<350
		1-10	Medium	Low	Low	Low	Low
	28-32	>10	Medium	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	24-28	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	<24	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Low	-	1	Low	Low	Low	Low	Low

Table 4 – IAQM Table 2Bc: Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Sources (m)	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

1.2.4. STEP 2C - DEFINE THE RISK OF IMPACTS

1.2.4.1. The dust emissions magnitude determined at Step 2A should be combined with the sensitivity of the area determined at Step 2B to determine the risk of impacts without mitigation applied. For those cases where the risk category is 'negligible' no mitigation measures beyond those required by legislation will be required.

Table 5 – IAQM Table 2C: Risk of Dust Impacts

Sensitivity of surrounding area	Dust Emission Magnitude		
	Large	Medium	Small
Demolition			
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible
Earthworks and Construction			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible
Trackout			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

1.2.5. STEP 3 – SITE SPECIFIC MITIGATION

1.2.5.1. Having determined the risk categories for each of the four activities it is possible to determine the site-specific measures to be adopted. These measures will be related to whether the site is considered to be a low, medium or high-risk site. The Air Quality Construction Guidance details the mitigation measures required for high, medium and low risk sites as determined in Step 2C.

1.2.6. STEP 4 - DETERMINE SIGNIFICANT EFFECTS

1.2.6.1. Once the risk of dust impacts has been determined in Step 2C and the appropriate dust mitigation measures identified in Step 3, the final step is to determine whether there are significant effects arising from the construction phase. For almost all construction activities, the application of effective mitigation should prevent any significant effects occurring to sensitive receptors and therefore the residual effect will normally be negligible.

1.3. PREDICTED IMPACTS

1.3.1. ROUTE SECTION 1 – LOVEDEAN (CONVERTER STATION AREA)

Construction Stage

Description of Works

1.3.1.1. This Route Section involves the construction of the converter station with activities being undertaken over a period of approximately 2.5 years.

1.3.1.2. Earthworks:

- Bulk Platform Cut 73,000 m³;
- Bulk Platform Fill 49,500 m³;
- Additional excavation to formation level 15,000 m³;
- Additional excavation to piling level 20,000 m³;
- Approx. bunds and pond fill 34,000 m³;
- Piling mat fill 20,000 m³;
- Road earthworks cut 2,000 m³, fill 18,000 m³, topsoil strip 3,500 m³;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: chalky clay to chalky loam; and
- Works over summer months

1.3.1.3. Construction:

- Valve Halls and Control Building approx. 208,000 m³ (calculated from elevation drawings);

- Steel frame clad construction with reinforced concrete blast and flood protection bunding around transformers;
- Reinforced concrete platform 200m x 200 m;
- Access road approx. 1.2 km in length; and
- Materials include concrete, steel, cladding, road foundation granular material (type 1), base course and surface course.

1.3.1.4. Trackout:

- Approximately 90 AADT HDV movements; and
- Constructed on-site access road approximately 1.2 km in length.

1.3.1.5. For the on-site access road, it is assumed that a temporary haul road will be constructed along the line of the proposed access road and extended to encompass the converter station site area.

1.3.1.6. The construction has been assumed to be 300 mm thick imported type 1 stone with a further 200 mm thick sacrificial layer along the length of the permanent access road route and a 300 mm thick type 1 around the site perimeter. In each case a geotextile layer would be provided. Following removal of the sacrificial layer this would be replaced by a 200 mm thick layer of permanent blacktop construction.

1.3.1.7. Based on the above information the dust emission magnitude of activities undertaken in Route Section 1 is shown in Table 6.

Table 6 – Route Section 1 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Earthworks	Large
Construction	Large
Trackout	Large

1.3.1.8. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 12.8 µg/m³, and the matrices in Table 2 and Table 3, the sensitivity of the surrounding area is shown in Table 7. The sensitivity of the area also includes the presence of four areas designated as Ancient Woodland that are directly adjacent to the Order Limits as follows:

- Crabdens Copse (ID 1490538);
- Crabdens Row (ID 1490537);
- Crabdens Row (ID 1490461); and

- Stoneacre Copse (ID 1490442).

1.3.1.9. These areas have been assigned the equivalent sensitivity to that of Sites of Special Scientific Interest.

Table 7 – Route Section 1 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area		
	Earthworks	Construction	Trackout
Dust Soiling	**Medium**	**Medium**	**Low**
Human Health	**Low**	**Low**	**Low**
Ecological	**Medium**	**Medium**	**Medium**

Impacts

1.3.1.10. Using the assessed dust emission magnitude in Table 6 and the assessed sensitivity of the area in Table 7 with the matrices in Table 5, the overall dust risk for Route Section 1 is shown in Table 8.

Table 8 – Route Section 1 Overall Dust Risk

Potential Impact	Sensitivity of the Surrounding Area		
	Earthworks	Construction	Trackout
Dust Soiling	High Risk	High Risk	Low Risk
Human Health	Low Risk	Low Risk	Low Risk
Ecological	Medium Risk	Medium Risk	Medium Risk

1.3.1.11. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 1 this is a **High Risk.**

1.3.2. ROUTE SECTION 2 – ANMORE

Construction Stage

Description of Works

1.3.2.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 45 days in summer/autumn 2021. The works will be undertaken in 100 m sections.

1.3.2.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.2.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: chalky clay to chalky loam; and
- Works over summer months

1.3.2.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas; and
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil.

1.3.2.5. Trackout:

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100m in length.

1.3.2.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 2 is shown in Table 9.

Table 9 – Route Section 2 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Large
Construction	Medium
Trackout	Large

1.3.2.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 12.9 µg/m³, and the matrices in Table 2 and Table 3, the sensitivity of the surrounding area is shown in Table 10.

Table 10 – Route Section 2 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	-
Human Health	Low	Low	Low	-
Ecological	-	-	-	-

Impacts

1.3.2.8. Using the assessed dust emission magnitude in Table 9 and the assessed sensitivity of the area in Table 10 with the matrices in Table 2, Table 3 and Table 4, the overall dust risk for Route Section 1 is shown in Table 11.

Table 11 – Route Section 2 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	High Risk	Medium Risk	-
Human Health	Low Risk	Low Risk	Low Risk	-
Ecological	-	-	-	-

1.3.2.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 2 this is a **High Risk.**

1.3.3. ROUTE SECTION 3 - DENMEAD/KINGS POND MEADOW

Construction Stage

Description of Works

1.3.3.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 45 days in summer/autumn of 2022 for trench ducting installation, plus 6 weeks of Horizontal Directional Drilling (HDD) between summer/autumn of 2022. The trenching works will be undertaken in 100m sections, whereas the HDD works will be undertaken in a single, underground stretch.

1.3.3.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.3.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: clay to silt; and
- Works over summer months.

1.3.3.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil; and
- HDD will be used to install cable ducting under Kings Pond.

1.3.3.5. Trackout:

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100 m in length.

1.3.3.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 3 is shown in Table 12.

Table 12 - Route Section 3 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Large
Construction	Medium
Trackout	Large

1.3.3.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 12.8 µg/m³, and the matrices in Table 2 and Table 3, the sensitivity of the surrounding area is shown in Table 13.

Table 13 - Route Section 3 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	-
Human Health	Low	Low	Low	-
Ecological	-	-	-	-

Impacts

1.3.3.8. Using the assessed dust emission magnitude in Table 12 and the assessed sensitivity of the area in Table 13 with the matrices in Table 5, the overall dust risk for Route Section 3 is shown in Table 14.

Table 14 - Route Section 3 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	High Risk	Medium Risk	-
Human Health	Low Risk	Low Risk	Low Risk	-
Ecological	-	-	-	-

1.3.3.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 3 this is a **High Risk**.

1.3.4. ROUTE SECTION 4 – HAMBLEDON ROAD TO BURNHAM ROAD

Construction Stage

Description of Works

1.3.4.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 533 days in the second half of 2022. The trenching works will be undertaken in 100 m sections.

1.3.4.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.4.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1km Soil Parent Material Soil Texture: clay to silt; and
- Works over summer months.

1.3.4.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil;

1.3.4.5. Trackout

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100m in length.

1.3.4.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 4 is shown in Table 15.

Table 15 - Route Section 4 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Large
Construction	Medium
Trackout	Large

1.3.4.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 13.7 µg/m³, and the matrices in Table 2 and Table 3, the sensitivity of the surrounding area is shown in Table 16.

Table 16 - Route Section 4 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	High
Human Health	Low	Low	Low	Low
Ecological	-	-	-	-

Impacts

1.3.4.8. Using the assessed dust emission magnitude in Table 15 and the assessed sensitivity of the area in Table 16 with the matrices in Table 5, the overall dust risk for Route Section 4 is shown in Table 17.

Table 17 - Route Section 4 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	**Earthworks**	**Construction**	**Trackout**
Dust Soiling	Medium Risk	High Risk	Medium Risk	High Risk
Human Health	Low Risk	Low Risk	Low Risk	Low Risk
Ecological	-	-	-	-

1.3.4.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 4 this is a **High Risk**.

1.3.5. ROUTE SECTION 5 – FARLINGTON

Construction Stage

Description of Works

1.3.5.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 45 days in late 2022. The trenching works will be undertaken in 100m sections.

1.3.5.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.5.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;

- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: chalky, silty loam; and
- Works over winter months.

1.3.5.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil;

1.3.5.5. Trackout

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100 m in length.

1.3.5.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 5 is shown in Table 18.

Table 18 - Route Section 5 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Medium
Construction	Medium
Trackout	Large

1.3.5.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 14.8 µg/m³, and the matrices in Table 2 and Table 3, the sensitivity of the surrounding area is shown in Table 19.

Table 19 - Route Section 5 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	High
Human Health	Low	Low	Low	Low
Ecological	-	-	-	-

Impacts

1.3.5.8. Using the assessed dust emission magnitude in Table 18 and the assessed sensitivity of the area in Table 19 with the matrices in Table 5, the overall dust risk for Route Section 5 is shown in Table 20.

Table 20 - Route Section 5 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	Medium Risk	Medium Risk	High Risk
Human Health	Low Risk	Low Risk	Low Risk	Low Risk
Ecological	-	-	-	-

1.3.5.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 5 this is a **High Risk**.

1.3.6. ROUTE SECTION 6 – ZETLAND FIELD TO SAINSBURY'S CAR PARK

Construction Stage

Description of Works

1.3.6.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 260 days in the second half of 2011 and first quarter of 2022. The trenching works will be undertaken in 100m sections.

1.3.6.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.6.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;

- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: sand to loam; and
- Works over summer months.

1.3.6.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil;

1.3.6.5. Trackout

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100m in length.

1.3.6.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 6 is shown in Table 21.

Table 21 - Route Section 6 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Large
Construction	Medium
Trackout	Large

1.3.6.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 15.2 µg/m³, and the matrices in Table 2 and Table 3, the sensitivity of the surrounding area is shown in Table 22.

Table 22 - Route Section 6 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	-
Human Health	Low	Low	Low	-
Ecological	-	-	-	-

Impacts

1.3.6.8. Using the assessed dust emission magnitude in Table 21 and the assessed sensitivity of the area in Table 22 with the matrices in Table 5, the overall dust risk for Route Section 6 is shown in Table 23.

Table 23 - Route Section 6 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	High Risk	Medium Risk	-
Human Health	Low Risk	Low Risk	Low Risk	-
Ecological	-	-	-	-

1.3.6.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Section 6 this is a **High Risk**.

1.3.7. ROUTE SECTION 7 – FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD

Construction Stage

Description of Works

1.3.7.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 45 days between in the middle of 2022 for trench ducting installation and 3 months of HDD in early 2022. Two months of HDD work in the middle of 2022 will be shared between this section and Section 6. The trenching works will be undertaken in 100m sections, whereas the HDD works will be undertaken in a single, underground stretch.

1.3.7.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.7.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1km Soil Parent Material Soil Texture: clay to sandy loam; and
- Works over summer months.

1.3.7.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil; and
- HDD will be used to install cable ducting under the operational south coast railway (also Route Section 6) and Chichester and Langstone Harbours RAMSAR and SPA, Langstone Harbour SSSI, and Solent Maritime SAC, and adjacent to the Farlington Marshes LNR.

1.3.7.5. Trackout

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100m in length.

1.3.7.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 7 is shown in Table 24.

Table 24 - Route Section 7 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Large
Construction	Medium
Trackout	Large

1.3.7.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 15.0 µg/m³, and the matrices in Table 2, Table 3, and Table 4, the sensitivity of the surrounding area is shown in Table 25.

Table 25 - Route Section 7 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium	Medium	Medium	Medium
Human Health	Low	Low	Low	Low
Ecological	High	High	High	High

Impacts

1.3.7.8. Using the assessed dust emission magnitude in Table 24 and the assessed sensitivity of the area in Table 25 with the matrices in Table 5, the overall dust risk for Route Section 7 is shown in Table 26.

Table 26 - Route Section 7 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	High Risk	Medium Risk	Medium Risk
Human Health	Low Risk	Low Risk	Low Risk	Low Risk
Ecological	Medium Risk	High Risk	Medium Risk	High Risk

1.3.7.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 7 this is a **High Risk**.

1.3.8. ROUTE SECTION 8 – GREAT SALTERNS GOLF COURSE TO VELDER AVENUE/MOORINGS WAY

Construction Stage

Description of Works

1.3.8.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 260 days in the second half of 2021 and first quarter of 2022 for trench ducting installation. The trenching works will be undertaken in 100m sections.

1.3.8.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.8.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: sand to sandy loam; and
- Works over summer months.

1.3.8.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil; and
- Works are directly adjacent to Chichester and Langstone Harbours RAMSAR and SPA, Langstone Harbour SSSI, and Solent Maritime SAC.

1.3.8.5. Trackout

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100m in length.

1.3.8.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 8 is shown in Table 27.

Table 27- Route Section 8 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Large
Construction	Medium
Trackout	Large

1.3.8.7. Using the assessed sensitivity of the area, receptor counts, the PM10 background concentration of 14.3 µg/m³, and the matrices in Table 2, Table 3 and Table 4, the sensitivity of the surrounding area is shown in Table 28.

Table 28 - Route Section 8 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	High
Human Health	Low	Low	Low	Low
Ecological	High	High	High	High

Impacts

1.3.8.8. Using the assessed dust emission magnitude in Table 27 and the assessed sensitivity of the area in Table 28 with the matrices in Table 5, the overall dust risk for Route Section 8 is shown in Table 29.

Table 29 - Route Section 8 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	High Risk	Medium Risk	High Risk
Human Health	Low Risk	Low Risk	Low Risk	Low Risk
Ecological	Medium Risk	High Risk	Medium Risk	High Risk

1.3.8.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 8 this is a **High Risk**.

1.3.9. ROUTE SECTION 9 – VELDER AVENUE/MOORINGS WAY TO BRANSBURY ROAD

Construction Stage

Description of Works

1.3.9.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of 260 days in the second half of 2021 and first quarter of 2022 for trench ducting installation. The trenching works will be undertaken in 100 m sections.

1.3.9.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.9.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: sand to sandy loam; and
- Works over summer months.

1.3.9.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;
- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil; and
- Works are directly adjacent to Chichester and Langstone Harbours RAMSAR and SPA, Langstone Harbour SSSI, and Solent Maritime SAC.

1.3.9.5. Trackout:

- Approximately 8-10 AADT HDV movements; and
- Constructed on-site access road is not expected to be more than 100 m in length.

1.3.9.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 9 is shown in Table 30.

Table 30 - Route Section 9 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Medium
Construction	Medium
Trackout	Medium

1.3.9.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 14.0 µg/m³, and the matrices in Table 2, Table 3 and Table 4, the sensitivity of the surrounding area is shown in Table 31.

Table 31 - Route Section 9 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	High
Human Health	Low	Low	Low	Low
Ecological	High	High	High	High

Impacts

1.3.9.8. Using the assessed dust emission magnitude in Table 30 and the assessed sensitivity of the area in Table 31 with the matrices in Table 5, the overall dust risk for Route Section 9 is shown in Table 32.

Table 32 - Route Section 9 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	Medium Risk	Medium Risk	Medium Risk
Human Health	Low Risk	Low Risk	Low Risk	Low Risk
Ecological	Medium Risk	Medium Risk	Medium Risk	Medium Risk

1.3.9.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 9 this is a **Medium Risk**.

1.3.10. ROUTE SECTION 10 – EASTNEY

Construction Stage

Description of Works

1.3.10.1. This Route Section involves the installation of ducting for the interconnector cable and will be undertaken over a period of approximately 154 days between in the last quarter of 2021 and first quarter of 2022 for trench ducting installation with a further 6 months for HDD involved in creating the landfall for the cable late 2021/early 2022. Construction of the fibre-optic booster stations will also be required in the Fort Cumberland Road Car Park. The trenching works will be undertaken in 100 m sections.

1.3.10.2. Demolition:

- Removal of surface material – highway surface or topsoil as appropriate.

1.3.10.3. Earthworks:

- Excavation of trench for ducting to be no more than 100 m x 1.2 m x 1.2 m at any one time;
- Temporary bunds of topsoil and subsoil of equivalent volume to excavated trench, stored prior to reinstatement;
- Worst-case BGS 1 km Soil Parent Material Soil Texture: sand to sandy loam; and
- Works over summer months.

1.3.10.4. Construction:

- Installation and removal of temporary site access road;
- Where prefabricated cable ducting sections are installed, these will be located and grouted into position;

- Where construction of the cable ducting is necessary, ducting will be installed using pre-mix concrete;
- Granular material, base course and surface course will be reinstated for road or footway surfaces;
- Subsoil and topsoil will be reinstated for green areas;
- Materials include concrete, road foundation granular material (type 1), base course and surface course, subsoil and topsoil;
- HDD works will be undertaken in the Solent Way marine area, with a land-based drilling rig located in the Fort Cumberland Road public car park. A 380kVA generator will be in constant operation for this part of the works; and
- Works are within 50m of the Solent Maritime SAC.

1.3.10.5. Trackout:

- Approximately 8-10 AADT HDV movements.

1.3.10.6. Based on the above information and the criteria from Table 1, the dust emission magnitude of activities undertaken in Route Section 10 is shown in Table 33.

Table 33 - Route Section 10 Dust Emission Magnitude

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Medium
Construction	Medium
Trackout	Medium

1.3.10.7. Using the assessed sensitivity of the area, receptor counts, the PM_{10} background concentration of 15.0 µg/m³, and the matrices in Table 2, Table 3 and Table 4, the sensitivity of the surrounding area is shown in Table 34.

Table 34 - Route Section 10 Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	High	High	High
Human Health	Low	Low	Low	Low
Ecological	Medium	Medium	Medium	Medium

Impacts

1.3.10.8. Using the assessed dust emission magnitude in Table 33 and the assessed sensitivity of the area in Table 34 with the matrices in Table 5, the overall dust risk for Route Section 10 is shown in Table 35.

Table 35 - Route Section 10 Overall Dust Risk

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium Risk	Medium Risk	Medium Risk	Medium Risk
Human Health	Low Risk	Low Risk	Low Risk	Low Risk
Ecological	Medium Risk	Medium Risk	Medium Risk	Medium Risk

1.3.10.9. The overall dust risk is conservatively assigned based on the highest dust risk from all categories. For Route Section 10 this is a **Medium Risk.**

1.4. MITIGATION

Table 36 – Dust and Air Emissions Mitigation Measures

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
Mitigation Measure	**Highly Recommended**				**Desirable**			**Not Required**		
Communications										
1. Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.										
2. Display the name and contact details of person(s) accountable for air quality and dust issues on the										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
site boundary. This may be the environment manager/engineer or the site manager.										
3. Display the head or regional office contact information										
4. Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in the IAQM Guidance. The desirable										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
measures should be included as appropriate for the site. The DMP may include monitoring of dust deposition, dust flux, real-time **PM_{10} continuous** monitoring and/or visual inspections.										
Site Management										
5. Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
6. Make the complaints log available to the local authority when asked.										
7. Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.										
8. Hold regular liaison meetings with other high-risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
transport/deliveries which might be using the same strategic road network routes.										
Monitoring										
9. Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
soiling checks of surfaces such as street furniture, cars and window sills within 100 m of site boundary, with cleaning to be provided if necessary.										
10. Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
11. Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.										
12. **Agree dust deposition, dust flux, or real-time PM_{10} continuous** monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.										
Preparing and Maintaining the Site										
13. Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.										
14. Erect solid screens or barriers around dusty activities or the site										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
boundary that are at least as high as any stockpiles on site.										
15. Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period										
16. Avoid site runoff of water or mud.										
17. Keep site fencing, barriers and scaffolding clean using wet methods.										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
18. Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.										
19. Cover, seed or fence stockpiles to prevent wind whipping.										
Operating vehicle/machinery and sustainable travel										
20. Ensure all on-road vehicles comply with the appropriate NRMM standards, where applicable										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
21. Ensure all vehicles switch off engines when stationary – no idling vehicles.										
22. Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.										
23. Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
the nominated undertaker and with the agreement of the local authority, where appropriate)										
24. Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.										
25. Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)										
Operations										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
26. Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems										
27. Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate										
28. Use enclosed chutes and conveyors and covered skips.										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
29. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.										
30. Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.										
Waste management										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
31. Avoid bonfires and burning of waste materials.										
Measures Specific to Demolition										
33. Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
34. Avoid explosive blasting, using appropriate manual or mechanical alternatives.										
35. Bag and remove any biological debris or damp down such material before demolition.										
Measures Specific to Earthworks										
36. Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable										
37. Use Hessian, mulches or tackifiers where it is not possible to										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
re-vegetate or cover with topsoil, as soon as is practicable.										
38. Only remove the cover in small areas during work and not all at once.										
Measures Specific to Construction										
39. Avoid scabbing (roughening of concrete surfaces) if possible.										
40. Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
particular process, in which case ensure that appropriate additional control measures are in place.										
41. Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.										
42. For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
Measures Specific to Trackout										
43. Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.										
44. Avoid dry sweeping of large areas.										
45. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great	9 – Moorings Way to	10 – Eastney (Landfall)
46. Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.										
47. Record all inspections of haul routes and any subsequent action in a site log book.										
48. Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.										
49. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud										

Mitigation Measure	1 – Lovedean (Converter Station	2 – Anmore	3 – Denmead/Kings Pond Meadow	4 – Hambeldon Road to Farlington Avenue	5 – Farlington	6 – Zetland Field Sainsbury's Car Park	7 – Farlington Junction to Airport Service Road	8 – Eastern Road (adjacent to Great Salterns Golf Course)	9 – Moorings Way to Bransbury Road	10 – Eastney (Landfall)
prior to leaving the site where reasonably practicable).										
50. Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.										
51. Access gates to be located at least 10m from receptors where possible.										