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Caesar's Way, Folkestone

Arbtech

Air Quality and Dust Assessment
November 2024





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Executive Summary

Rappor Consultants Limited was appointed by Arbtech to undertake an air quality and dust assessment for a proposed aggregate washing plant and workshop at the site on Caesar's Way in Folkestone. The application seeks full planning permission for the proposals at the existing McAleer Contracts aggregate production facility and will be in addition to the existing consented operations at the Site. The proposed development Site is located within the administrative area of Folkestone and Hythe District Council.

A qualitative mineral dust risk assessment was undertaken in accordance with Institute of Air Quality Management guidance to determine dust impact risk associated with the operation of the proposed plant. Existing Dust Management Plans were reviewed to identify whether the existing levels of mitigation were sufficient to prevent off-Site dust impacts. With the implementation of these mitigation measures the proposals were identified to have a negligible effect with regards to local air quality impacts with Institute of Air Quality Management guidance.

Consideration was also given to the potential impact of additional vehicle trips generated by the additional operations at the Site on local air quality. The uplift in vehicle trip generation was reviewed and screened using the Institute of Air Quality Management and Environmental Protection UK two stage screening process, to determine whether a detailed road traffic emissions impact assessment was required. The proposals will not generate additional vehicle movements in excess the relevant screening criteria and therefore detailed dispersion modelling of development-generated road traffic was not undertaken.



Contents

Document Control.....	1
Executive Summary.....	2
1 Introduction	4
2 Relevant Policy and Guidance	7
3 Assessment Methodology	9
4 Operational Dust Impact Assessment.....	13
5 Operational Phase Screening Assessment	19
6 Summary and Conclusions.....	20

List of Figures and Tables

Figure 1.1 Site Location.....	5
Figure 1.2: Proposed Site Layout	6
Table 3.1: Receptor Distance Categorisation Criteria	9
Table 3.2: Receptor Sensitivity Classification Criteria	9
Table 3.3: Categorisation of Frequency of Potentially Dusty Winds	10
Table 3.4: Dust Pathway Effectiveness Classification	10
Table 3.5: Estimation of Dust Impact Risk	11
Table 3.6: Significance of Dust Impacts.....	11
Table 4.1: Dust Source Potential	14
Table 4.2: Location and Sensitivity of Receptors	14
Figure 4.1: Sensitive Dust Receptor Locations	16
Table 4.2: Dust Pathway Effectiveness at Sensitive Receptors	17
Table 4.3: Assessment of Dust Impact Risk.....	18
Table 4.4: Significance of Dust Effects	18

Appendices

- Appendix A – Glossary
- Appendix B – Local Planning Policy
- Appendix C – Dust Source Potential Criteria
- Appendix D – Wind Rose



1 Introduction

General

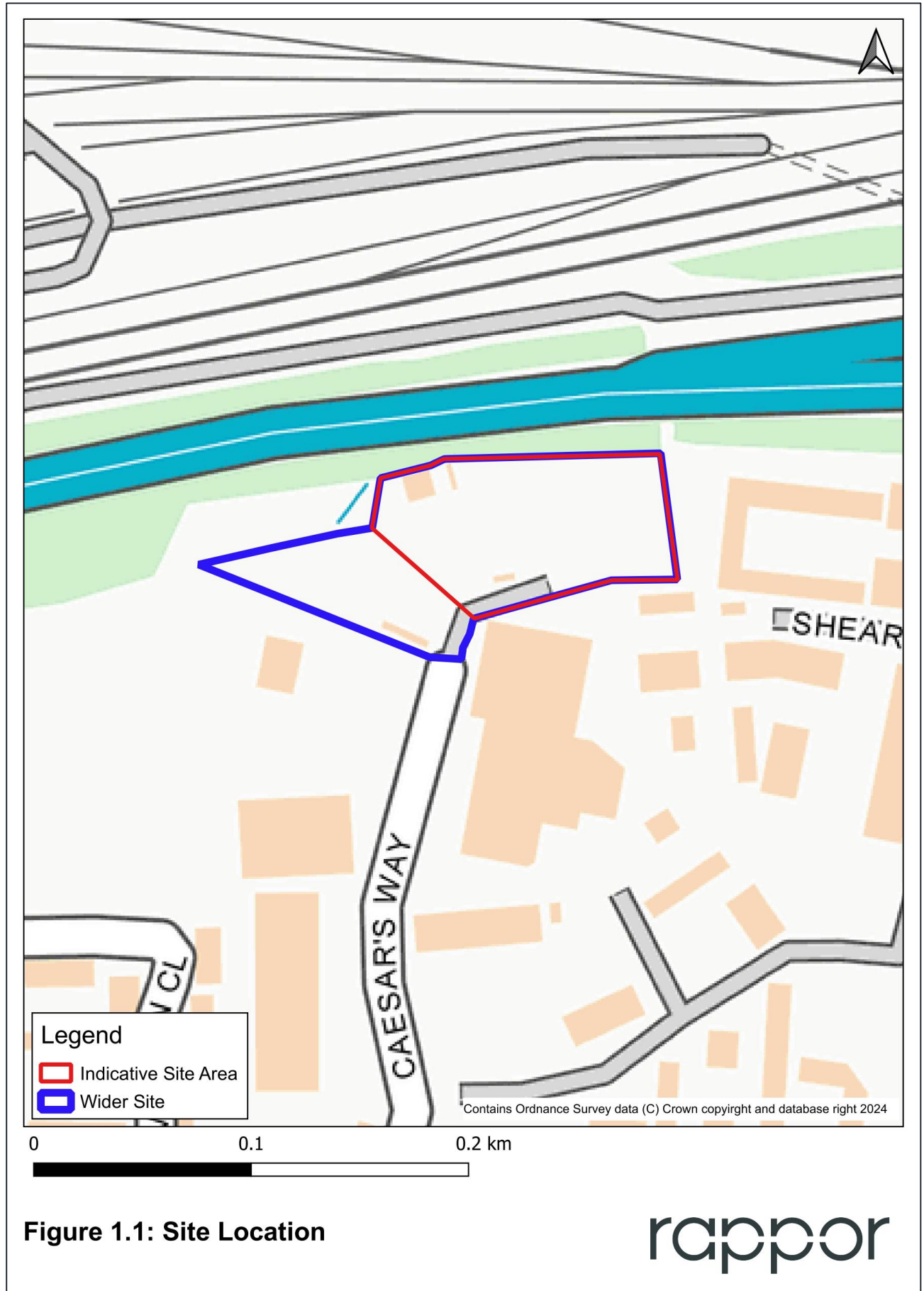
- 1.1 Rappor Consultants Limited was instructed by Arbtech to undertake an air quality and dust assessment for a proposed aggregate washing plant and construction of a new workshop at land off Caesar's Way in Folkestone ('the Site'). The Site is currently operated as a recycled aggregate production facility and the proposals will enable further production of aggregates in addition to sustainability benefits through the ability to extract more aggregate from incoming materials.
- 1.2 The assessment considers the potential impacts of the proposed development on local air quality as a result of dust emissions and road traffic emissions associated with the operation of the proposed aggregate washing plant. A qualitative operational dust assessment was undertaken in accordance with guidance to consider the impact of dust associated with the proposed plant on amenity and human health in the vicinity of the Site. An operational phase road traffic emissions screening assessment was undertaken to consider the impact of additional vehicle movements associated with the proposals on local air quality, development-generated road traffic on local air quality.
- 1.3 The assessment takes account of relevant local and national policy and guidance. A glossary of terms utilised in this report is provided in **Appendix A**.

Site Location

- 1.4 The Site is located on Caesar's Way on the northern edge of Folkestone and is currently operated by McAleer Contracts as a recycled aggregate production facility which processes construction and demolition waste into recycled aggregates. Operations also include demolition and waste removal and plant hire. The existing operations on Site will remain in situ, with the proposed aggregate washing plant providing further capabilities to extract aggregates from the existing waste materials stream incoming to the Site.
- 1.5 The Site is bound to the north by the M20 motorway with the Eurotunnel terminal beyond. To the east and south of the of the Site is an existing commercial and retail park. A coach depot is located to the southwest of the Site whilst shrubbery and construction compounds are located to the west. The Site lies within the administrative area of Folkestone and Hythe District Council (FHDC).
- 1.6 The Site location is illustrated in **Figure 1.1** with the proposed aggregate plant and workshop illustrated in **Figure 1.2**.



Figure 1.1 Site Location



Proposed site plan - Enlargement of wash down plant
Scale 1:200

Recycled Aggregate Production Facility



2 Relevant Policy and Guidance

National Legislation and Planning Policy

2.1 The following national legislation and planning policy is relevant to air quality and was considered throughout this air quality assessment:

- European Parliament, EU 2008 Ambient Air Quality Directive (2008)¹;
- HMSO, Air Quality (England) Regulations (2000)²;
- HMSO, Environment Act (1995)³;
- HMSO, Environment Act (2021)⁴;
- Department for Environment, Air Quality Strategy (1997)⁵;
- Department for the Environment, Food and Rural Affairs (DEFRA), Air Quality Strategy (2007)⁶;
- Department for the Environment, Food and Rural Affairs, The Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020)⁷;
- HMSO, The Environmental Targets (Fine Particulate Matter) (England) Regulations (2023)⁸;
- Department for the Environment, Food and Rural Affairs, Air Quality Strategy: Framework for Local Authority Delivery (2023)⁹;
- Department for the Environment, Food and Rural Affairs, Environmental Improvement Plan 2023 (2023)¹⁰;
- Ministry of Levelling Up, Housing and Communities, National Planning Policy Framework (NPPF) (2023)¹¹; and
- Ministry for Housing, Communities and Local Government, Planning Practice Guidance (PPG) for air quality (2019)¹².

Local Planning Policy

2.2 The following local planning policy was reviewed with regards to air quality and a summary of any relevant policies is provided in **Appendix B**:

- Folkestone and Hythe District Council, Core Strategy Review 2022 (2022)¹³; and

¹ European Parliament (2008) Council Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe

² HMSO (2000) Statutory Instrument 2000 No. 928, The Air Quality (England) Regulations 2000 (as amended), London: HMSO

³ HMSO (1995) The Environment Act 1995, London: TSO

⁴ HMSO (2021) The Environment Act 2021, London: TSO

⁵ Department of the Environment (DoE) (1997) The UK National Air Quality Strategy, London: HMSO

⁶ Department of the Environment, Food and Rural Affairs (Defra) (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, London: HMSO

⁷ Department of the Environment, Food and Rural Affairs (Defra) (2020) The Environment (Miscellaneous Amendments) (EU Exit) Regulations, London: HMSO

⁸ HMSO (2023) The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

⁹ Defra (2023) Air Quality Strategy: Framework for Local Authority Delivery

¹⁰ Defra (2023) Environmental Improvement Plan 2023, First revision of the 25 Year Environment Plan

¹¹ Ministry of Levelling Up, Communities and Local Government (2023) National Planning Policy Framework, HMSO London

¹² Ministry for Housing, Communities and Local Government (2019) Planning Practice Guidance Air Quality

¹³ Folkestone and Hythe District Council (2022) Core Strategy Review 2022



- Kent County Council, Minerals and Waste Local Plan 2013 – 2030 (2020)¹⁴.

Air Quality Guidance

2.3 The following air quality guidance was utilised in the air quality assessment:

- DEFRA, Local Air Quality Management Technical Guidance (LAQM.TG) 22) (2022)¹⁵;
- Institute of Air Quality Management (IAQM), Guidance on the Assessment of Mineral Dust Impacts for Planning (2016)¹⁶; and
- IAQM and Environmental Protection UK (EPUK), Land-Use Planning and Development Control: Planning for Air Quality (2017)¹⁷.

¹⁴ Kent County Council (2020) Minerals and Waste Local Plan 2013 - 2030

¹⁵ Defra (2022) Local Air Quality Management Technical Guidance LAQM.TG(22)

¹⁶ Institute of Air Quality Management (2016) Guidance on the Assessment of Mineral Dust Impacts for Planning, Institute of Air Quality Management, London

¹⁷ Institute of Air Quality Management and Environmental Protection UK (2017) Land-Use Planning and Development Control: Planning for Air Quality



3 Assessment Methodology

Operational Dust Impact Assessment

- 3.1 The proposals have the potential to give rise to air quality impacts as a result of dust emissions associated with the processing of materials through the new aggregate washing facility. The potential impact of these activities was considered through a qualitative assessment in accordance IAQM guidance¹⁶. The IAQM guidance sets out a qualitative risk-based approach using the Source → Pathway → Receptor concept. The methodology is summarised below.

Step 1: Describe Site Characteristics

- 3.2 The location of the Site and surroundings should be reviewed to identify factors that may influence how dust emissions behave upon release to the environment. The review should identify existing dust-generating activities that may influence the current baseline dust environment.

Step 2: Determine Dust Source Potential

- 3.3 A review of the proposals should be undertaken and compared to the indicative criteria set out in IAQM guidance¹⁶ to determine the potential level of dust associated with individual dust-generating activities. The indicative criteria to determine Dust Source Potential as detailed in IAQM guidance are provided in **Appendix C**.

Step 3: Identification of Sensitive Receptors

- 3.4 A review of local land uses within 400m of the dust-generating activities should be undertaken to identify the location of existing receptors, including their relative sensitivity to dust soiling and emissions. **Table 3.1** details the criteria to categorise receptor locations in accordance with IAQM guidance, whilst **Table 3.2** details the criteria to determine the sensitivity of receptors to dust soiling.

Table 3.1: Receptor Distance Categorisation Criteria

Category	Criteria
Distant	Receptor is between 200m and 400m from the dust source.
Intermediate	Receptor is between 100m and 200m from the dust source.
Close	Receptor is less than 100m from the dust source.

Table 3.2: Receptor Sensitivity Classification Criteria

Sensitivity	Criteria
High	• Users can reasonably expect enjoyment of a high level of amenity; or • The appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected to be present continuously or at least regularly for extended periods as part of the normal pattern of use of the land. Indicative examples include residential dwellings, medium- and long-term car parks and car showrooms.



Sensitivity	Criteria
Medium	• Users would expect to enjoy a reasonable level of amenity but would not reasonably expect to enjoy the same level of amenity as in their home; or • The appearance, aesthetics or value of property could be diminished by soiling; or • The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. Indicative examples include parks, and places of work.
Low	• The enjoyment of amenity would not reasonably be expected; or • There is property that would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or • There is transient exposure where people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land. Indicative examples include playing fields, farmland (unless commercially sensitive horticulture), footpaths, short term car parks and roads.

Step 4: Establish Pathway Effectiveness

- 3.5 A review of local meteorological data should be undertaken to identify the percentage of time that potentially dusty winds may be experienced blowing towards identified sensitive receptors. Meteorological data from the Langdon Bay recording station were utilised to establish meteorological conditions as the closest, and most representative recording station to the Site. **Table 3.3** details the criteria to categorise the frequency of potentially dusty winds.

Table 3.3: Categorisation of Frequency of Potentially Dusty Winds

Frequency Category	Criteria
Infrequent	Frequency of winds (>5/s) from the direction of the dust source on dry days are less than 5%.
Moderately frequent	The frequency of winds (>5m/s) from the direction of the dust source on dry days are between 5% and 12%.
Frequent	The frequency of winds (>5m/s) from the direction of the dust source on dry days are between 12% and 20%.
Very frequent	The frequency of winds (>5m/s) from the direction of the dust source on dry days are greater than 20%.

- 3.6 Upon categorisation of the frequency of potentially dusty winds towards identified sensitive receptors, the distance of the receptor from the dust-generating activities is compared to the relative frequency of potentially dust winds towards the receptor to determine the Dust Pathway Effectiveness from the Site to the receptor. **Table 3.4** details the classification criteria for Dust Pathway Effectiveness.

Table 3.4: Dust Pathway Effectiveness Classification

Receptor Category	Frequency of Potentially Dusty Winds			
	Infrequent	Moderately Frequent	Frequent	Very Frequent
Close	Ineffective	Moderately effective	Highly effective	Highly effective
Intermediate	Ineffective	Moderately effective	Moderately effective	Highly effective
Distant	Ineffective	Ineffective	Moderately effective	Moderately effective



Step 5: Estimate Dust Impact Risk

- 3.7 Once the Dust Source Potential is defined for each dust-generating activity and Pathway Effectiveness have been defined for each identified sensitive receptor, the two are combined to identify the Dust Impact Risk at each receptor. **Table 3.5** details the risk matrix for dust impacts.

Table 3.5: Estimation of Dust Impact Risk

Pathway Effectiveness	Dust Source Potential		
	Small	Medium	Large
Highly Effective	Low Risk	Medium Risk	High Risk
Moderately Effective	Negligible Risk	Low Risk	Medium Risk
Ineffective	Negligible Risk	Negligible Risk	Low Risk

Step 6: Identify Significance of Dust Effects

- 3.8 The criteria set out in **Table 3.6** detail the matrix to determine the overall significance of dust impacts at receptors taking into consideration the Dust Impact Risk identified for the receptor, and the relative sensitivity of the receptor to dust.

Table 3.6: Significance of Dust Impacts

Dust Impact Risk	Receptor Sensitivity		
	Low	Medium	High
High Risk	Minor Adverse Effect	Moderate Adverse Effect	Major Adverse Effect
Medium Risk	Negligible Effect	Minor Adverse Effect	Moderate Adverse Effect
Low Risk	Negligible Effect	Negligible Effect	Minor Adverse Effect
Negligible Risk	Negligible Effect	Negligible Effect	Negligible Effect

Operational Phase – Screening Assessment

- 3.9 Whilst the Site is an existing aggregate processing facility, the introduction of the proposed aggregate washing facility will enable additional materials to be processed on site. This will give rise to additional vehicle movements relative to those currently generated by the existing use of the Site. Consideration was given to the impact of these additional vehicle movements on local air quality. IAQM and EPUK guidance¹⁷ provides screening criteria to determine whether a detailed assessment of development-generated road traffic emissions is potentially required. The screening criteria are split into two stages:

Stage One:

- 3.10 The Stage One criteria detailed below are utilised to determine whether there is the need to proceed to Stage Two of the screening assessment:
- If any of the following apply:
 - a) 10 or more residential units or a Site area greater than 0.5ha; or



- b) More than 1,000m² of floorspace for all other use classes or a Site area of greater than 1ha;
- Coupled with any of the following:
 - a) The development has more than 10 parking spaces; or
 - b) The development will have a centralised energy facility or other centralised combustion process.

Stage Two:

3.11 Where the proposed development exceeds the criteria set out in Stage One, the following indicative criteria are used to determine whether a detailed assessment of development-generated road traffic emissions is required.

3.12 The Stage Two screening criteria are:

- A change in Light Duty Vehicles (LDVs) flows of:
 - a) More than 100 Annual Average Daily Traffic (AADT) flow within or adjacent to an Air Quality Management Area (AQMA); or
 - b) More than 500 LDVs as an AADT elsewhere.
- A change in Heavy Duty Vehicles (HDVs) of:
 - a) More than 25 AADT flow within or adjacent to an AQMA; or
 - b) More than 100 AADT flow elsewhere.

3.13 Where none of the Stage Two criteria are exceeded, IAQM and EPUK guidance¹⁷ states:

“there should be no requirement to carry out an air quality assessment of the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects”.



4 Operational Dust Impact Assessment

Step 1: Describe Site Characteristics

- 4.1 In accordance with IAQM guidance¹⁶, consideration was given to the existing Site operations and the dust baseline that is established in the area. The Site is an existing aggregate production facility which accepts waste from demolition and construction operations prior to processing into a variety of different sized aggregates for sale and re-use within the building trade. The following operations occur on Site that are considered to give rise to dust emissions:
- Delivery and handling of materials prior to processing including unloading, moving and storage of materials in stockpiles;
 - Processing of materials through existing plant including size reduction crushing/processing and screening;
 - Storage of processed materials in stockpiles prior to, and after, compliance testing; and
 - Removal of processed aggregate from Site for onward use.
- 4.2 The Site operates under an Environmental Permit which limits waste streams that can be accepted and includes dust management measures that are required to be implemented to address potential dust releases associated with the operations. The Permit is enforced by the Environment Agency for compliance, with non-compliance resulting in potential Enforcement Notices and temporary restrictions to activities on Site. The Dust Emissions Management Plan¹⁸ for the Site was reviewed to identify existing dust mitigation measures and it is understood that these measures will be retained and utilised for the proposed aggregate washing facility.

Step 2: Determine Dust Source Potential

- 4.3 The proposals will include the following potentially dust-generating activities on Site:
- Delivery of additional waste materials for washing;
 - Screening / crushing through washing plant;
 - Processing of materials through filter press; and
 - Storage and handling of processed materials.
- 4.4 The Dust Source Potential for the proposals was determined in accordance with IAQM guidance¹⁶, utilising the magnitude classifications. **Table 4.1** details the activities associated with the proposals and the associated dust magnitude assigned. The overall Dust Source Potential was then determined based on the average magnitude of activities.

¹⁸ Beyond Waste (2020) Dust Emissions Management Plan



Table 4.1: Dust Source Potential

Activity	Magnitude	Justification
Materials Handling	Medium	A small number of heavy plant will operate within the Site as a result of the proposals however, there will be materials handled that are of a medium to high dust potential, depending on the nature of waste materials being handed for processing.
On-Site Transportation	Small	There will be a limited number of additional HDV movements associated with the proposals and the Site is small, minimising the distance that dusty materials will be transported on Site. The Site is not fully paved however, the measures in place to minimise dust associated with existing activities will prevent accumulation of dust on internal access routes.
Mineral Processing	Medium	The materials processed within the aggregate washing plant will vary in dust potential however, some high dust potential materials may be processed. The end product will also vary in dust potential, depending on the size and amount of aggregate processed. The proposals will utilise a number of processes. Dust management measures in place within the Site will seek to minimise emissions associated with the processing of materials.
Stockpiles / Exposed Surfaces	Small	Materials will be stored on Site in stockpiles however, dust management measures will be implemented to minimise dust releases. Stockpiles will vary in size and duration of storage time depending on demand for processed materials. All stockpiles will be located within the Site boundary.
Off-Site Transportation	Small	The proposals will generate a low number of additional trips off-Site for processed materials. The Site area is small, minimising the length of the internal road and measures are in place to keep internal access routes clean from dust that may be tracked out of the Site.

- 4.5 The proposals were determined to have an overall Small Dust Source Potential when taking into consideration the measures implemented on Site to minimise dust emissions, and the nature and scale of operations.

Step 3: Identification of Sensitive Receptors

- 4.6 A review of local aerial imagery was undertaken to determine the location of existing receptors within 400m of the Site. For the purpose of the assessment, consideration was given to the closest sensitive receptors in all directions, taking into consideration relative sensitivity. Where multiple receptors were identified of the same use and sensitivity, the closest receptor to the Site was considered in the assessment to derive the greatest possible dust risk. Receptors of the same sensitivity and use class but further away from the Site are expected to experience a reduced impact of dust relative to uses closer to the Site and therefore the assessment represents a robust and conservative assessment of potential dust impacts.
- 4.7 The identified receptors were categorised in accordance with IAQM guidance¹⁶ based on their distance. Their relative sensitivity to dust was also identified. **Table 4.2** details the identified receptors within 400m of the Site and their relative sensitivity to dust. **Figure 4.1** illustrates the locations of identified receptors considered in the assessment.

Table 4.2: Location and Sensitivity of Receptors

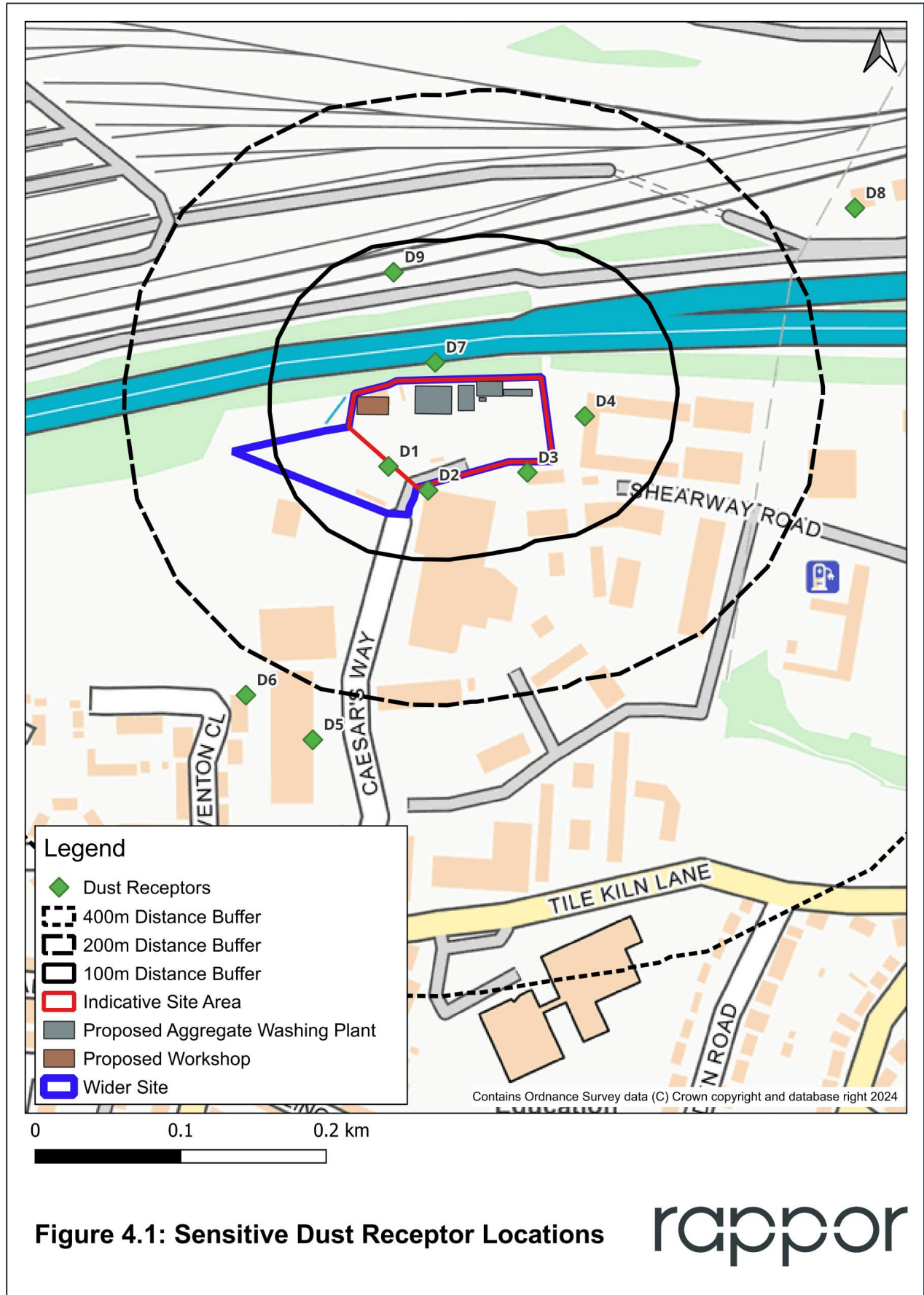
Receptor ID	Name	Distance Category	Sensitivity
D1	Crosskeys Travel and Crosskeys Coaches	Close – receptors approximately 35m southwest of proposed aggregate washing facility.	High – coaches parked here regularly for extended periods of time. Dust soiling could affect amenity.



Receptor ID	Name	Distance Category	Sensitivity
D2	West Design Products Commercial Warehouse	Close – receptors located approximately 50m south of proposed aggregate washing facility.	Medium – places of work are considered medium sensitivity to dust soiling as users would expect some level of amenity however not the same level that they would expect at home.
D3	Offices within Shearway Business Park	Close – receptors located approximately 55m south of proposed aggregate washing facility.	Medium – places of work are considered medium sensitivity to dust soiling as users would expect some level of amenity however not the same level that they would expect at home.
D4	Retail premises within Shearway Business Park	Close – receptors located approximately 50m southeast of proposed aggregate washing facility.	Medium – places of work are considered medium sensitivity to dust soiling as users would expect some level of amenity however not the same level that they would expect at home.
D5	Little Starz Nursery and Kids Planet Play Centre	Distant – receptors located approximately 220m southwest of the proposed aggregate washing facility.	High – children are particularly sensitive to adverse health impacts associated with inhalation of air pollutants such as dust.
D6	Residential properties on Elventon Close	Distant – receptors located approximately 220m southwest of the proposed aggregate washing facility.	High – residential properties are considered highly sensitive to dust due to the length of time people may be present and the level of amenity expected.
D7	M20 motorway	Close – located approximately 15m north of proposed aggregate washing facility at closest point.	Low – roads are considered low sensitivity to dust due to the transient exposure of users and the mobile nature of users meaning vehicles are not present for periods likely to enable soiling to occur.
D8	Rail terminal freight area	Distant – located approximately 250m northeast of proposed aggregate washing facility.	Medium – vehicles may be present here for extended periods of time but not regularly and the level of amenity expected is low.
D9	Rail terminal lines	Close – approximately 80m north of the proposed aggregate washing facility at closest point.	Low – trains will be present transiently at this location and the level of amenity expected is low.



Figure 4.1: Sensitive Dust Receptor Locations





Step 4: Establish Pathway Effectiveness

- 4.8 The Pathway Effectiveness from the proposed aggregate washing facility to the identified sensitive receptors was defined based on the location of sensitive receptors relative to the Site, taking account prevailing meteorological conditions. Meteorological data was utilised from the Langdon Bay recording station based on the similar elevation and influences of coastal winds compared to the location of the Site. **Table 4.2** summarises the Pathway Effectiveness at each receptor. The wind rose for Langdon Bay is provided in **Appendix D**.

Table 4.2: Dust Pathway Effectiveness at Sensitive Receptors

Receptor ID	Frequency of Winds	Distance Category	Pathway Effectiveness
D1	Moderately frequent - Receptor located southwest of Site. North-easterly winds experienced 5-12% of the year.	Close – receptors approximately 35m southwest of proposed aggregate washing facility.	Moderately effective
D2	Frequent - Receptor located south of Site. Northerly winds experienced 12 -20% of the year.	Close – receptors located approximately 50m south of proposed aggregate washing facility.	Highly effective
D3	Frequent - Receptor located south of Site. Northerly winds experienced 12 -20% of the year.	Close – receptors located approximately 55m south of proposed aggregate washing facility.	Highly effective
D4	Frequent - Receptor located east of Site. Westerly winds experienced 12 -20% of the year.	Close – receptors located approximately 50m southeast of proposed aggregate washing facility.	Highly effective
D5	Moderately frequent - Receptor located southwest of Site. North-easterly winds experienced 5-12% of the year.	Distant – receptors located approximately 220m southwest of the proposed aggregate washing facility.	Ineffective
D6	Moderately frequent - Receptor located southwest of Site. North-easterly winds experienced 5-12% of the year.	Distant – receptors located approximately 220m southwest of the proposed aggregate washing facility.	Ineffective
D7	Moderately frequent - Receptor located north of Site. Southerly winds experienced 5-12% of the year.	Close – located approximately 15m north of proposed aggregate washing facility at closest point.	Moderately effective
D8	Very frequent – Receptor locations north-east of the Site. South-westerly winds experienced >20% of the year.	Distant – located approximately 250m northeast of proposed aggregate washing facility.	Moderately effective
D9	Moderately frequent - Receptor located north of Site. Southerly winds experienced 5-12% of the year.	Close – approximately 80m north of the proposed aggregate washing facility at closest point.	Moderately effective

Step 5: Estimate Dust Impact Risk

- 4.9 The Source Potential and Pathway Effectiveness were combined to determine the potential impact of dust associated with the proposed aggregate washing facility on individual receptors. **Table 4.3** summarises the impact effect of dust emissions at each receptor.



Table 4.3: Assessment of Dust Impact Risk

Receptor ID	Source Potential	Pathway Effectiveness	Dust Impact Risk
D1	Small	Moderately effective	Negligible Risk
D2	Small	Highly effective	Low Risk
D3	Small	Highly effective	Low Risk
D4	Small	Highly effective	Low Risk
D5	Small	Ineffective	Negligible Risk
D6	Small	Ineffective	Negligible Risk
D7	Small	Moderately effective	Negligible Risk
D8	Small	Moderately effective	Negligible Risk
D9	Small	Moderately effective	Negligible Risk

Step 6: Identify Significance of Dust Effects

- 4.10 The sensitivity of individual receptors was combined with the identified Dust Impact Risk at each receptor to determine the overall significance of dust effects associated with the proposed aggregate washing facility. **Table 4.4** summarises the significance of effect of dust emissions at each sensitive receptor.

Table 4.4: Significance of Dust Effects

Receptor ID	Source Potential	Pathway Effectiveness	Dust Impact Risk	Sensitivity	Effect Significance
D1	Small	Moderately effective	Negligible Risk	High	Negligible Effect
D2	Small	Highly effective	Low Risk	Medium	Negligible Effect
D3	Small	Highly effective	Low Risk	Medium	Negligible Effect
D4	Small	Highly effective	Low Risk	Medium	Negligible Effect
D5	Small	Ineffective	Negligible Risk	High	Negligible Effect
D6	Small	Ineffective	Negligible Risk	High	Negligible Effect
D7	Small	Moderately effective	Negligible Risk	Low	Negligible Effect
D8	Small	Moderately effective	Negligible Risk	Medium	Negligible Effect
D9	Small	Moderately effective	Negligible Risk	Low	Negligible Effect

- 4.11 As detailed in **Table 4.4**, the proposed aggregate washing facility at individual receptors, and overall, was identified to have a negligible effect with the dust mitigation measures in place. It is therefore considered that no further measures are required to minimise dust impacts, and the proposals will not significantly influence local air quality.



5 Operational Phase Screening Assessment

- 5.1 The trip generation associated with the proposed development was reviewed and compared to the Stage Two screening criteria set out in IAQM and EPUK guidance¹⁷.

Stage Two

- 5.2 The proposed development will generate an additional 68 vehicle movements per day as a result of additional recycled aggregate deliveries. All movements will be HDV movements as existing staff levels will not change from that associated with the current operations at the Site. The trip generation falls below the relevant Stage Two screening criteria of 500 LDVs and 100 HDVs outside an AQMA.
- 5.3 In accordance with IAQM and EPUK guidance¹⁷, where the Stage Two criteria are not exceeded, a detailed assessment of the impact of the proposed development on local air quality is not required, and the proposed development is considered to have an insignificant effect.



6 Summary and Conclusions

- 6.1 Rappor was instructed by Arbtech to undertake an air quality and dust assessment for submission with a planning application for a proposed aggregate washing plant and construction of a new workshop at land off Caesar's Way in Folkestone.
- 6.2 A qualitative operational dust risk assessment was undertaken to consider the influence of dust emissions associated with the proposals on local air quality at existing sensitive receptor locations. Consideration was given to the nature of the proposed operations, existing baseline dust environment, proximity and sensitivity of receptors and effectiveness of the pathway. Mitigation measures in operation at the Site were also reviewed to consider their influence of the dust potential of the proposals. The assessment identified that the proposals would have a negligible effect on local air quality as a result of dust emissions.
- 6.3 A qualitative operational phase road traffic emissions screening assessment was undertaken to consider the impact of the proposed development on local air quality. The two stage screening criteria set out in guidance were not exceeded and there was no need to undertake any further detailed assessment of the impact of development-generated road traffic. Where the two stage screening criteria are not exceeded, the proposed development can be considered as having a not significant impact on local air quality as a result of development-generated traffic.



Appendix A – Glossary



Term	Definition
AADT	Annual Average Daily Traffic flow.
Air quality objective	Policy target generally expressed as a maximum ambient concentration to be achieved, either without exception or with a permitted number of exceedances within a specific timescale (see also air quality standard).
Air quality standard	The concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The standards are based on the assessment of the effects of each pollutant on human health including the effects on sensitive sub groups (see also air quality objective).
Annual mean	The average (mean) of the concentrations measured for each pollutant for one year. Usually this is for a calendar year, but some species are reported for the period April to March, known as a pollution year. This period avoids splitting winter season between two years, which is useful for pollutants that have higher concentrations during the winter months.
AQAP	Air Quality Action Plan.
AQMA	Air Quality Management Area.
AQS	Air Quality Strategy.
Defra	Department for Environment, Food and Rural Affairs.
EPUK	Environmental Protection UK.
Exceedance	A period of time where the concentrations of a pollutant is greater than, or equal to, the appropriate air quality standard.
HDV	Heavy Duty Vehicles (HGVs + buses and coaches)
HGV	Heavy Goods Vehicles.
IAQM	Institute of Air Quality Management.
LAQM	Local Air Quality Management.
LDV	Light Duty Vehicles (motorbikes, cars, vans and small trucks)
NO	Nitrogen monoxide, a.k.a. nitric oxide.
NO ₂	Nitrogen dioxide.
NO _x	Nitrogen oxides.
Percentile	The percentage of results below a given value.
PM ₁₀	Particulate matter with an aerodynamic diameter of less than 10 micrometres.
PM _{2.5}	Particulate matter with an aerodynamic diameter of less than 2.5 micrometres.
micrograms per cubic metre (µg.m ⁻³)	A measure of concentration in terms of mass per unit volume. A concentration of 1µg.m ⁻³ means that one cubic metre of air contains one microgram (millionth of a gram) of pollutant.



Appendix B – Local Planning Policy



Folkestone and Hythe Core Strategy Review

The existing Folkestone and Hythe Core Strategy Review was considered and no policies relating to the proposed development were identified.

Kent Minerals and Waste Local Plan 2013 – 2030

The Kent Minerals and Waste Plan sets out the vision for minerals and waste resource management in the County, with the following policies identified:

Policy CSM 8 Secondary and Recycled Aggregates

[...]

Proposals for additional capacity for secondary and recycled aggregate production including those relating to the expansion of capacity at existing facilities that increases the segregation and hence end product range/quality achieved, will be granted planning permission if they are well located in relation to the source of input materials or need for output materials, have good transport infrastructure links and accord with the other relevant policies in the development plan.

Policy DM11 Health and Amenity

Minerals and waste development will be permitted if it can be demonstrated that they are unlikely to generate unacceptable adverse impacts from noise, dust, vibration, odour, emissions, bioaerosols, illumination, visual intrusion, traffic or exposure to health risks and associated damage to the qualities of life and wellbeing to communities and the environment. This may include production of an air quality assessment of the impact of the proposed development and its associated traffic movements and necessary mitigation measures required through planning condition and/or planning obligation. This will be a particular requirement where a proposal might adversely affect the air quality in an AQMA.

Proposals for minerals and waste development will also be required to ensure that there is no unacceptable adverse impact on the use of other land for other purposes."



Appendix C – Dust Source Potential Criteria



Magnitude	Activity	Criteria
Large	Site preparation / restoration	- Working area >10 hectares - Bunds >8m high >100,000m³ material moved >10 heavy plant active at any one time - Fine grained and friable material
	Extraction	- Working area >100 hectares - Frequent drilling and blasting - High dust potential materials e.g. fine particle size and/or low moisture content >1,000,000 tonnes to be extracted per annum
	Materials handling	>10 loading vehicles within 50m of Site boundary - High dust potential material to be transferred - Unconsolidated surface
	On-Site transport	- Unpaved haul routes >250 Heavy Duty Vehicles (HDV) movements in any one day - Uncontrolled Site speed limit
	Material processing	>1,000,000 tonnes per annum processed - High dust potential material
	Stockpiles / exposed surfaces	- Large area of exposed stockpiles - Regular material transfers - High dust potential material
	Off-Site transport	>200 HDV movements - Unsurfaced haul route - Limited vehicle cleaning facilities - Short access road length
Medium	Site preparation / restoration	- Working area 2.5 – 10 hectares - Bund height 4 – 8m - Material movement 20,000 – 100,000m³ 5 – 10 heavy plant operating at any one time
	Extraction	- Working area 20,000 – 100,000 hectares 200,000 – 1,000,000 tonnes extracted per annum
	Materials handling	5 – 10 loading vehicles - Operations 50 – 100m from Site boundary - Medium dust potential material
	On-Site transport	100 – 250 HDV movements in any one day - Partially paved haul route
	Material processing	200,000 – 1,000,000 tonnes of material processed per annum - Medium dust potential material
	Stockpiles / exposed surfaces	1 – 12 months stockpile presence 2.5 – 10 hectares of exposed area - Medium dust potential material
	Off-Site transport	25- 200 HDV movements in any one day - Partially surfaced haul route - Some cleaning facilities present but not constantly in use 20 – 50m haul route
Small	Site preparation / restoration	<2.5 hectare working area <4m bund height <20,000m³ material moved

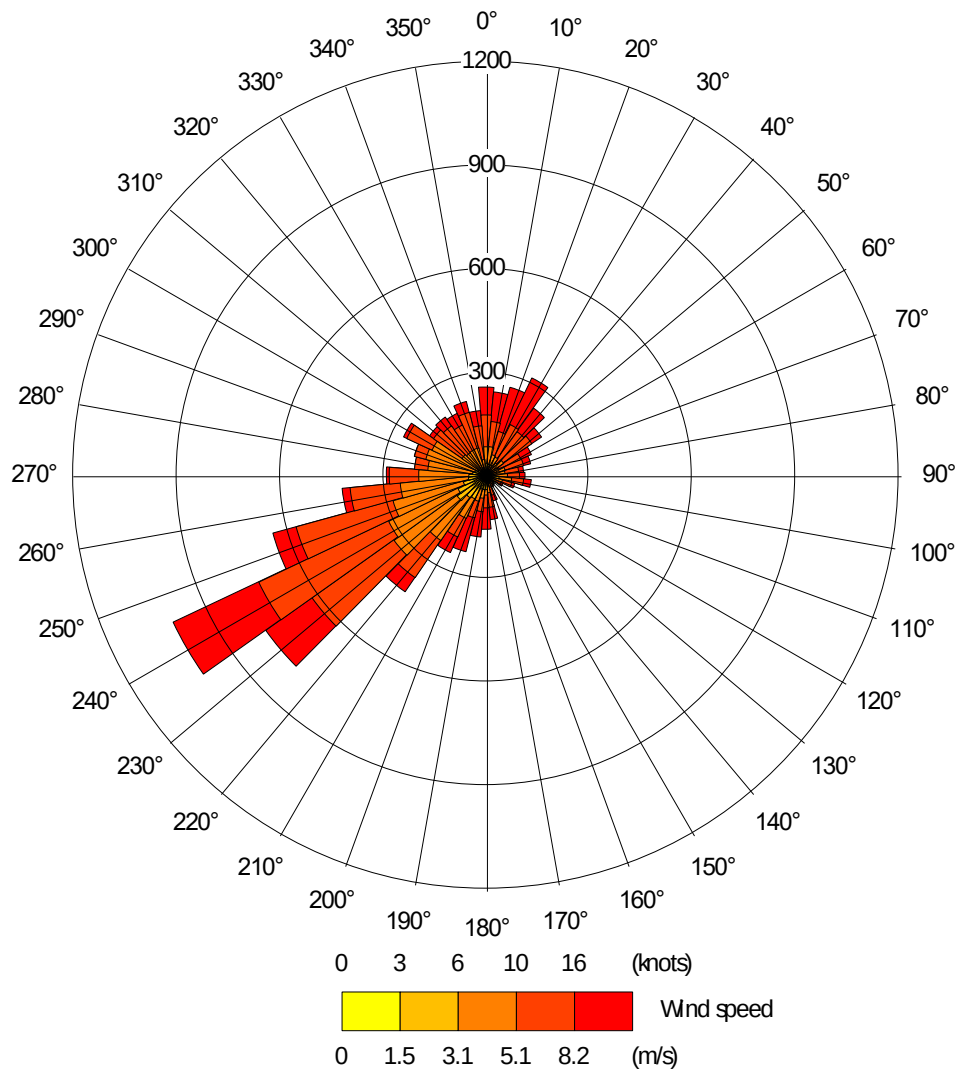


Magnitude	Activity	Criteria
		• <5 heavy earth moving plant active at any one time • Low dust potential material
	Extraction	• <20 hectare working area • Low energy extraction e.g. hydraulic excavator • Low dust potential material • <200,000 tonnes extracted per annum
	Materials handling	• <5 loading vehicles • Surfaced areas • >100m from Site boundary
	On-Site transport	• Use of conveyors • Paved haul routes • <100 HDV movements in any one day • Low Site speed limit
	Material processing	• Low dust potential material • <200,000 tonnes of material processed per annum
	Stockpiles / exposed surfaces	• Short stockpile duration • <2.5 hectares of exposed surfaces • Stockpiles >100m from Site boundary • Low dust potential materials
	Off-Site transport	• <25 HDV movements in any one day • Paved haul routes • Cleaning facilities for vehicles



Appendix D – Wind Rose

The wind rose for the Langdon Bay meteorological recording station is illustrated below. The prevailing wind direction is from the southwest.



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