Project Erebus Environmental Statement Technical Appendix 26.1: Construction Dust Risk Assessment

ERE-CON-ITP-CON-ENV-0084

Client:	Blue Gem Wind Ltd
Project No:	2923
Version:	0.3
Date:	2021-10-28

Document Information

Project Name:	Project Erebus Environmental Statement Technical Appendix 26.1: Construction Dust Risk Assessment
Document Title:	ERE-CON-ITP-CON-ENV-0084
Document Status:	Draft
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Approved:	J Hazzard
Date:	2021-10-28
Version:	0.3
Project/Proposal Number:	2923
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Revision History

Version	Date	Authored	Reviewed	Approved	Notes
03	2021-10-28	Annie Danskin	Jonas Beaugas	Jenny Hazzard	Final draft

Contents

Technical Appendix 26.1 – Construction Dust Risk Assessment

1. Introduction

The construction phase dust risk assessment was carried out using the method and criteria in Institute of Air Quality Management (IAQM) guidance (Holman *et* al, 2014) to determine the impact magnitude and sensitivity of the area around the site. This assessment should be followed with reference to the **ES Volume 2 Figures 26.1-26.4**.

The assessment considered the four elements of the construction phase as follows:

- Demolition;
- Earthworks;
- Construction; and
- Trackout.

The assessment was undertaken by application of the following steps as outlined in the IAQM guidance:

- Step 1: Screen the need for a detailed assessment;
- Step 2: Assess the risk of dust impacts;
  - Step 2A – Define the dust emission magnitude;
  - Step 2B – Define the sensitivity of the area;
  - Step 2C – Define the Risk of Impacts.
- Step 3: Site Specific Mitigation; and
- Step 4: Determine Significant Effects

2. Step 1: Screening

The Study Area for the assessment of construction phase dust impacts associated with the Proposed Development was defined in accordance with the IAQM guidance which stipulates that:

"An assessment will normally be required where there is:

A 'human receptor' within:

- *350 m of the boundary of the site; or*
- *50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).*

An internationally, nationally or locally designated 'ecological receptor' within:

- *50 m of the boundary of the site;*
- *50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s)."*

These boundaries define the construction phase Study Area.

In this assessment, the Study Area for human health assessment included a buffer of 350 m from proposed construction activities, as recommended by the IAQM guidance, plus, an additional 30 m in each direction to accommodate the flexibility in the final position of the onshore cable route within a 60 m corridor, which

is accommodated by the Project Design Envelope (PDE). Sensitive human receptors within a buffer of 380 m from the mapped proposed construction activities and 50 m from potential trackout routes were therefore included in this risk assessment.

For designated ecological receptors, the Study Area included a buffer of 50 m from proposed construction activities, as recommended by the IAQM, plus, an additional 30 m in each direction to accommodate the PDE. Sensitive ecological receptors within a buffer of 80 m from the mapped proposed construction activities and 50 m from potential trackout routes were therefore included in this risk assessment.

The application of these extended buffer areas includes the maximum number of receptors in the assessment and is therefore considered to represent the worst case for the construction phase dust risk assessment.

The Study Area for the assessment is shown in **Figure 26.1.**

Residential and commercial address "AddressBase Plus" data were purchased from Ordnance Survey in April 2021 for the local area. The number of properties within each of the above boundaries was identified.

Aerial imagery was used to estimate the number of caravans/mobile homes occupied on a temporary basis within each of the boundaries above.

All designated ecological receptors within the boundaries above were identified from publicly available data from Natural Resources Wales (NRW).

The total number of receptors identified was as follows:

- 101 permanent residential properties;
- 19 commercial properties (including cafes, retail, public conveniences and amenities, farms and solar installations);
- 86 caravan/mobile homes (estimated);
- Angle Peninsula Coast Site of Special Scientific Interest (SSSI);
- Pembrokeshire Marine Special Area of Conservation (SAC);
- Limestone Coast of South West Wales SAC;
- Castlemartin Coast Special Protected Area (SPA); and
- Four sites designated as Ancient Woodland.

The screening process concluded that a detailed dust risk assessment was required.

The Study Area for the assessment is shown in detailed segments in **Figures 26.4a-g (Appendix A) and Figure 26.4.**

3. Step 2: Assessing the Risk of Dust Impacts

The risk of dust arising in sufficient quantities to cause annoyance and/or health and/or ecological impacts has been determined using the four risk categories of negligible, low, medium and high risk. The Study Area has been allocated a risk category for each of the elements of the construction phase based on two factors:

- The scale and nature of the works, which determines the potential dust emission magnitude as small, medium or large (Step 2A); and
- The sensitivity of the area to dust impacts (Step 2B) which is defined as low, medium or high sensitivity.

3.1 Step 2A Defining the Potential Dust Emission Magnitude

3.1.1 Demolition

There are no existing structures within the Proposed Development Envelope (PDE) which will be required to be demolished. The effects of demolition on human and ecological receptors is not considered further.

3.1.2 Earthworks

Site clearance works, open trench digging for cabling, horizontal directional drilling (HDD), digging for construction compound and substation foundations and temporary stockpiling of material represent the principal activities that may generate emissions of particulate material. The total area of earthworks is estimated to be >10,000m^2, which, in accordance with the IAQM guidance, results in a potential dust emission magnitude for earthworks of large.

Two potential installation options have been developed for landfall, namely HDD or open-cut trenching. The preferred option for landfall is HDD as this will reduce the footprint of impact on shallow sub-tidal and intertidal marine habitats. However, without information from detailed HDD feasibility studies, and further geotechnical site investigation works that would only be undertaken post-submission (2022), the risk remains that HDD may not be technically feasible. Therefore, open cut trenching is also considered as a contingency option. In accordance with **Chapter 4: Proposed Development Description**, the overall disturbance area for open-cut trenching is estimated to be 1,950m^2.

In accordance with the IAQM guidance, the area of open-cut trenching is <2,500m^2 and therefore the dust emission magnitude at landfall earthworks is considered to be small.

3.1.3 Construction

Dust emissions during construction can give rise to elevated dust deposition and PM_{10} concentrations.

Construction activities will include the creation of construction compounds along the cabling route with two main compound areas, one near the Project's onshore substation and one near the chosen landfall point. The compound requirements are not finalised, but in accordance with **Chapter 4: Proposed Development Description**, the overall footprint is estimated to be 11,000 m^2. The footprint of the substation is estimated to be approximately 11,328 m^2. The offices and facilities will be modular portacabin facilities assembled on site without significant generation of dust and one small building of 35 m x 25 m x 15m (13,125 m^3). The total volume of construction activity is therefore estimated to be around 35,453 m^3.

The total construction volume is therefore in the range 25,000-100,000 m^3, which, in accordance with the IAQM guidance, results in a potential dust emission magnitude for construction of medium.

3.1.4 Trackout

Without site-specific mitigation, the IAQM guidance states that track-out can occur from roads up to 500 m from the site exit of a large construction site. The impact declines with distance from the roads and therefore, it is only necessary to consider track-out up to 50 m from the edge of the road.

There are a number of access points to the cabling route which connect to the B4320 between the proposed Substation and West Angle Caravan Park. The whole length of this road has been assumed as a potential area for trackout from vehicles accessing and departing from different parts of the PDE as a worst case assessment. The track out route is shown in Figures 26.1, Figure 26.4a-g and Figure 26.5.

It has been estimated that the Proposed Development will introduce approximately 23 HDV movements per day on the B4320 during peak construction. The potential dust emission magnitude for track-out for 23 HDVs is assessed as medium.

3.1.5 Overall Dust Emission Magnitude

The overall dust emission magnitude is summarised in **Table 26.1-1.**

Table 26.1-1 – Overall Dust Emission Magnitude

Activities	Dust Emission Magnitude
Demolition	n/a
Earthworks	Large
Construction	Medium
Track-out	Medium

3.2 Step 2B – Defining the Sensitivity of the Area

3.2.1 Sensitivity of People and Property to Dust Soiling Effects

The sensitivity of the area to dust soiling effects on people and property depends on the number of receptors with low, medium and high sensitivity within specified distances of the dust generating sources. In this assessment, all permanent and temporary residential properties were considered to be high sensitivity receptors and all commercial properties were considered to be medium sensitivity receptors to dust soiling effects.

The distances used in the IAQM guidance are within 20 m, 50 m, 100 m and 350 m of the dust generating sources. In this assessment, the distances considered were 50 m, 80 m, 130 m and 380 m, from earthworks and construction areas in order to accommodate all potential receptors within the PDE, and 20 m and 50 m from potential trackout routes.

The assessment criteria are summarised in **Table 26.1-2** and the highest sensitivity should be applied.

Table 26.1-2 – Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from 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

3.2.1.1 Earthworks

There are two highly sensitive residential properties, and three medium sensitivity commercial receptors within 20 m of the potential earthworks areas (up to 50 m of the mapped proposed earthworks to accommodate the PDE). In accordance with the IAQM criteria in **Table 26.1-2**, sensitivity of the area to dust soiling due to earthworks has been assessed as medium.

3.2.1.2 Construction

There are two highly sensitive residential properties, and three medium sensitivity commercial receptors within 20 m of the potential construction areas (up to 50 m of the mapped proposed earthworks to accommodate the PDE). In accordance with the IAQM criteria in **Table 26.1-2**, sensitivity of the area to dust soiling due to construction has been assessed as medium.

3.2.1.3 Trackout

There are approximately 37 high sensitivity residential receptors and four medium sensitivity commercial receptors within 20m of the potential trackout route. Sensitivity of the area to dust soiling due to trackout has been assessed as high.

3.2.2 Sensitivity of the Area to Human Health Impacts

The sensitivity of the area to human health impacts depends on the number of receptors with low, medium and high sensitivity within specified distances of the dust generating sources in combination with the existing background annual mean concentration of particulate matter (PM_{10}) in the Study Area. In this assessment, all permanent and temporary residential properties were considered to be high sensitivity receptors to human health impacts and all commercial properties were considered to be low sensitivity receptors as members of the public would not spend extended periods of time at these locations.

The average annual mean PM_{10} background concentrations at all receptors within the Study Area is below the IAQM criterion of 24µg/m^3 as can be seen in **Figure 26.3.**

The assessment criteria to determine sensitivity to human health impacts in this assessment are summarised in **Table 26.1-3** and the highest sensitivity should be applied.

Table 26.1-3 – Sensitivity of the Area to Human Health Impacts where Annual Mean PM_{10} is <24µg/m^3

Receptor Sensitivity	Number of Receptors	Distance from Source (m)				
		<20	<50	<100	<200	>350
High	>100	Medium	Low	Low	Low	Low
	10-100	Low	Low	Low	Low	Low
	1-10	Low	Low	Low	Low	Low
Medium	>10	Low	Low	Low	Low	Low
	1-10	Low	Low	Low	Low	Low
Low	≥1	Low	Low	Low	Low	Low

3.2.2.1 Earthworks

There are two highly sensitive residential properties, and three low sensitivity commercial receptors within 20 m of the potential earthworks areas (up to 50 m of the mapped proposed earthworks to accommodate the PDE). In accordance with the IAQM criteria in **Table 26.1-3**, sensitivity of the area to dust soiling due to earthworks has been assessed as low.

3.2.2.2 Construction

There is one highly sensitive residential property within 20 m of the potential construction compound areas and two low sensitivity commercial receptors within 200m of proposed construction compound areas. In accordance with the IAQM criteria in **Table 26.1-3**, sensitivity of the area to dust soiling due to construction has been assessed as low.

3.2.2.3 Trackout

There are approximately 37 high sensitivity residential receptors and four low sensitivity commercial receptors to human health impacts within 20 m of the potential trackout route. Sensitivity of the area to dust soiling due to trackout has been assessed as low.

3.2.3 Sensitivity of the Area to Ecological Impacts

The sensitivity of the area to ecological impacts depends on the number of designated receptors with low, medium and high sensitivity within specified distances of the dust generating sources. Further to the outcome of the ecological assessment, the following designated ecological receptors have been categorised

as medium sensitivity receptors in accordance with the IAQM guidance due to their classification under the Habitats Directive 92/43/EEC:

- Angle Peninsula Coast Site of Special Scientific Interest (SSSI);
- Pembrokeshire Marine Special Area of Conservation (SAC);
- Limestone Coast of South West Wales SAC; and
- Castlemartin Coast Special Protected Area (SPA).

Four sites designated as Ancient Woodland, have been assumed to be low sensitivity ecological receptors.

The distances used in the IAQM guidance are within 20 m and 50 m. In this assessment, the distances considered were 50 m and 80 m from earthworks and construction areas in order to accommodate all potential receptors within the PDE, and 20 m and 50 m from potential trackout routes.

The assessment criteria to determine the sensitivity of the area to ecological impacts in this assessment are summarised in **Table 26.1-4** and the highest sensitivity should be applied.

Table 26.1-4 – Sensitivity of the Area to Ecological Impacts

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

3.2.3.1 Earthworks

There are two designated ecological receptors of medium sensitivity within 20 m the PDE where earthworks would take place at either of the landfall options as shown in **Figure 26.4**. These are Angle Peninsula Coast Site of Special Scientific Interest (SSSI) and the Pembrokeshire Marine Special Area of Conservation (SAC). Sensitivity of the area to ecological dust impacts due to earthworks is assessed as medium.

3.2.3.2 Construction

There are no designated ecological receptors within 50 m of proposed construction areas. The impacts of construction on ecological receptors is not considered further.

3.2.3.3 Trackout

There are designated ecological receptors of medium and low sensitivity within 20 m of the potential track-out route. These are the Limestone Coast of South West Wales Special Area of Conservation (SAC) and Castlemartin Coast Special Protected Area (SPA) (medium sensitivity) and four designations of ancient woodland (low sensitivity), as shown in **Figure 26.4.** Sensitivity of the area to ecological dust impacts due to trackout is assessed as medium as a worst case.

3.2.4 Overall Sensitivity of the Area

The overall sensitivity of the area is summarised in **Table 26.1-5.**

Table 26.1-5 – Overall Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Track-out
Dust Soiling	n/a	Medium	Medium	High

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Track-out
Human Health	n/a	Low	Low	Low
Ecological	n/a	Medium	n/a	Medium

3.3 Step 2C – Defining the Risk of Impact

The risk of impacts has been determined by combining the dust emission magnitude for each element of the construction phase with the overall sensitivity of the area to dust soiling, human health and ecological impacts.

The assessment criteria to determine the risk of dust impacts during earthworks and construction *without mitigation* is shown in **Table 26.1-6** and the highest risk should be selected.

Table 26.1-6 – Risk of Dust Impacts – Earthworks and Construction

Sensitivity of the Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

The assessment criteria to determine the risk of dust impacts during trackout *without mitigation* is shown in **Table 26.1-7** and the highest risk should be selected.

Table 26.1-7 – Risk of Dust Impacts – Trackout

Sensitivity of the Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

3.3.1.1 Earthworks

The large magnitude with medium sensitivity results in a medium risk of dust soiling impacts due to earthworks.

The large magnitude with low sensitivity results in a low risk of dust impacts on human health due to earthworks.

The small dust emission magnitude next to landfall earthwork options with the medium sensitivity of the Angle Peninsula Coast SSSI and the Pembrokeshire Marine SAC results in a low risk of ecological dust impacts due to earthworks.

3.3.1.2 Construction

The medium magnitude with medium sensitivity results in a medium risk of dust soiling impacts due to construction.

The medium magnitude with low sensitivity results a low risk of dust impacts on human health due to construction.

There is no risk of ecological impacts due to the construction phase.

3.3.1.3 Trackout

The medium magnitude with high sensitivity results in a medium risk of dust soiling impacts due to trackout.

The medium magnitude with the low sensitivity results in a low risk of dust impacts on human health due to track-out.

The medium magnitude with the medium sensitivity of the Limestone Coast of South Wales SAC and Castlemartin Coast SPA results in a low risk of ecological dust impacts due to trackout at small areas of these designated sites within 50 m of the B4230.

The medium magnitude with the low sensitivity of the four ancient woodland sites within 50 m of the B4230 results in a low risk of ecological dust impacts due to trackout.

3.3.2 Overall Risk of Dust Impacts

Table 26.1-8 below summarises the dust risk to define site-specific mitigation.

Table 26.1-8 – Summary of Dust Risk to Define Site-Specific Mitigation

Potential Impact	Risk of Dust Impact			
	Demolition	Earthworks	Construction	Track-out
Dust Soiling	n/a	Medium	Medium	Medium
Human Health	n/a	Low	Low	Low
Ecological	n/a	Low	n/a	Low

4. Step 3: Defining Site-Specific Mitigation

Outlined below are recommendations for mitigation measures to be included in a Construction Environment Management Plan (CEMP), based on the overall risk of dust impacts as summarised in **Table 26.1-8**. These are measures that are listed as Desirable or Highly Recommended in the IAQM guidance.

4.1 Proposed mitigation for communications:

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary; and
- Display the head or regional office contact information.

4.2 Proposed mitigation for dust management:

- Develop and implement a Dust Management Plan (DMP). This may include measures to control other emissions, approved by the Local Authority.

4.3 Proposed mitigation for site management:

- 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;
- Make the complaints log available to the local authority upon request; and
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.

4.4 Proposed mitigation for monitoring:

- 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;
- Increase 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; and
- 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.

4.5 Proposed mitigation for preparing and maintaining the site:

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible;
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Prevent site runoff of water or mud to protect drains and watercourses;
- Keep site fencing, barriers and scaffolding clean using wet methods;

- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site; and
- Cover, seed or fence stockpiles to prevent wind whipping.

4.6 Proposed mitigation for site operations:

- 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;
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and
- 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.

4.7 Proposed mitigation for waste management:

- Prohibit bonfires and burning of waste materials.

4.8 Operating vehicle/machinery and sustainable travel:

- Ensure all vehicles switch off engines when stationary;
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable;
- Impose and signpost a maximum speed limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas; and
- Issue all suppliers and contractors with delivery routes and access times/restrictions.

4.9 Proposed mitigation specific to earthworks:

- Re-vegetate earthworks and exposed areas/soils stockpiles to stabilise surfaces as soon as practicable;
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- Only remove the cover in small areas during work and not all at once.

4.10 Proposed mitigation specific to construction:

- Avoid scabbling (roughening of concrete surfaces) if possible;
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate control measures are in place;
- 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; and
- For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

4.11 Proposed mitigation specific to track-out:

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site (water source to be determined). This may require a sweeper being continuously in use;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; and
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site log book; and
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

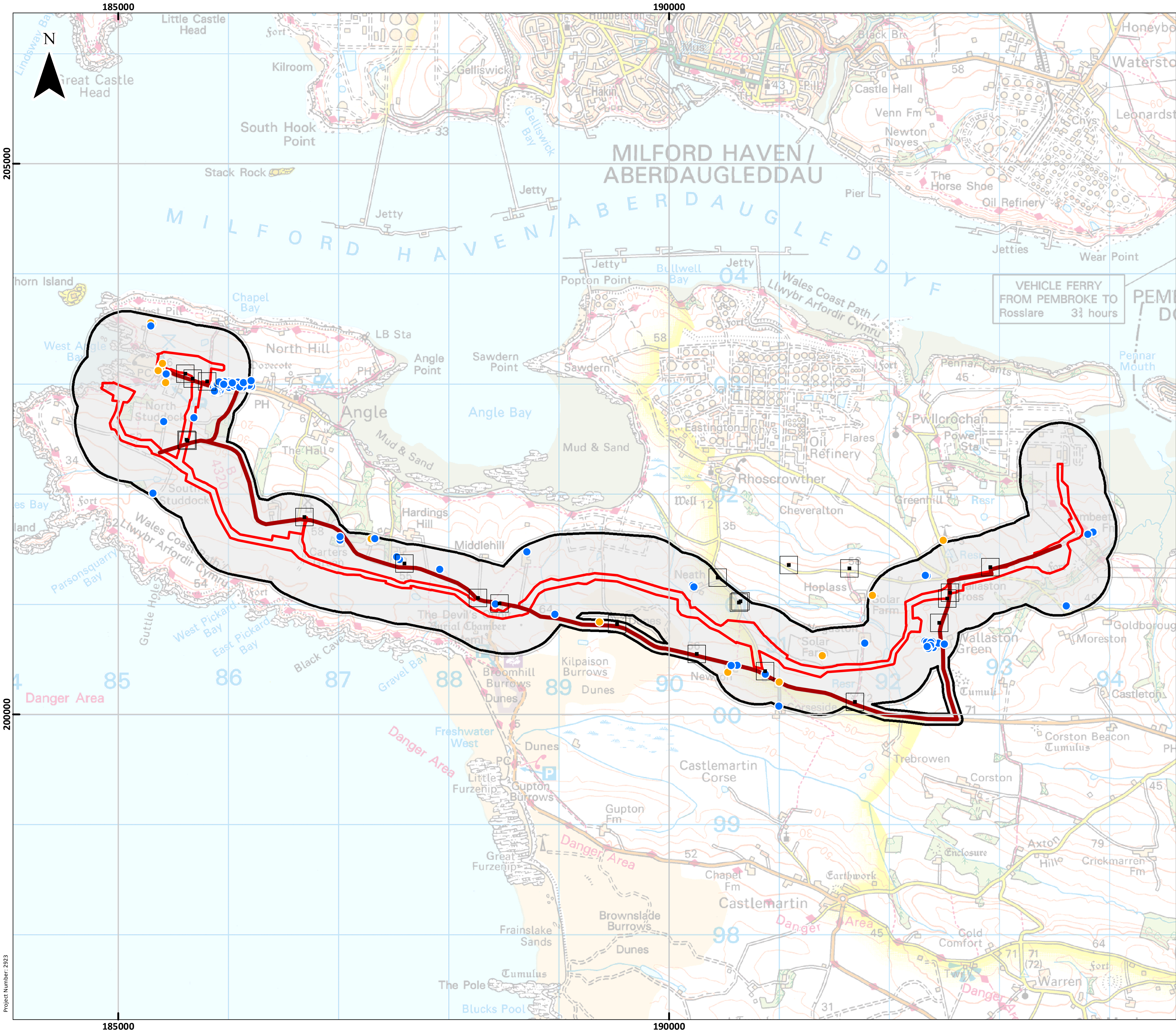
5. Summary of Significance

The dust risk assessment concluded that without specific site mitigation there are:

- Two highly sensitive residential receptors and three medium sensitivity commercial receptors subject to a medium risk of dust soiling during earthworks and construction;
- 37 highly sensitive residential receptors and four medium sensitivity commercial receptors subject to a medium risk of dust soiling trackout;
- Two highly sensitive residential receptors and three medium sensitivity commercial receptors subject to a low risk of human health impacts during earthworks;
- One highly sensitive residential receptor and two medium sensitivity commercial receptors subject to a low risk of human health impacts during construction;
- 37 highly sensitive residential receptors and four medium sensitivity commercial receptors subject to a low risk of dust soiling trackout;
- Two medium sensitive ecological receptors subject to a low risk of dust impacts during earthworks (Angle Peninsula Coast Site SSSI and the Pembrokeshire Marine SAC); and.
- Two medium sensitive ecological receptors subject to a low risk of dust impacts during track-out (Limestone Coast of South West Wales SAC and Castlemartin Coast SPA and four low sensitivity receptors (Ancient Woodland) subject to a low risk of dust impacts during track-out.

The good-practice mitigation measures and site-specific mitigation measures outlined above will be adopted to minimise these identified risks such that the residual effect of dust is negligible adverse and therefore ***not significant***. These will be included in a CEMP submitted by the contractor to the local authority for approval prior to the commencement of any works.

Appendix A


185000
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N
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Great Castle Head
Kilroom
Gelliswick
Hakin
South Hook Point
Stack Rock
Gelliswick Bay
MILFORD HAVEN / ABERDAUGLEDDAU
MILFORD HAVEN / ABERDAUGLEDDAU
Jetty
Castle Hall
Venn Fm
Newton Noyes
The Horse Shoe
Oil Refinery
Pier
Jetties
Wear Point
Honeyborough
Waterston
Leonardston
Thorn Island
Chapel Bay
West Angle Bay
North Hill
LB Sta
Angle Point
Sawdern Point
Sawdern
Popton Point
Bullwell Bay
Wales Coast Path / Llwybr Arfordir Cymru
VEHICLE FERRY FROM PEMBROKE TO Rosslare 3½ hours
Pennar Mouth
Pennar
Angle
Angle Bay
Mud & Sand
The Hall
North Studdock
South Studdock
Eastington
Oil Refinery
Flares
Pwllcrochan
Power Sta
Rhoscrowther
Cheveralton
Greenhill
Hardings Hill
Middlehill
Carters
Neath
Hoplass
Solar Farm
Wallaston Cross
Wallaston Green
Goldborough
Moreston
Castleton
Parsonsquarry Bay
Guttle Hole
West Pickard Bay
East Pickard Bay
Black Cave
Gravel Bay
The Devil's Quoit Burial Chamber
Broomhill Burrows
Kilpaison Burrows
Dunes
Newton
Danger Area
Freshwater West
Little Furzenip
Gupton Burrows
Gupton Fm
Castlemartin Corse
Trebrowen
Corston Beacon
Corston
Axton Hill
Crickmarren Fm
Great Furzenip
Chapel Fm
Castlemartin
Brownslade Burrows
Frainslake Sands
Cold Comfort
Warren
The Pole
Tumulus
Blucks Pool
Earthwork
Enclosure

KEY

- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 350m Buffer for Human Receptors & 50m Buffer for Track-out Route
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor

0 0.5 1 km

Scale 1:33,000 @ A3

OWC AN AQUALISBRAEMAR COMPANY

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Blue Gem Wind

MarineSpace Making Sense of the Marine Environment

Project Erebus
Environmental Statement

Figure 26.4a

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date: 09/12/2021	Drawn by: AD	Checked by: ES	Version: V2

Project Number: 2923

N

North Hill

Dovecote

PH

The Hall

KEY

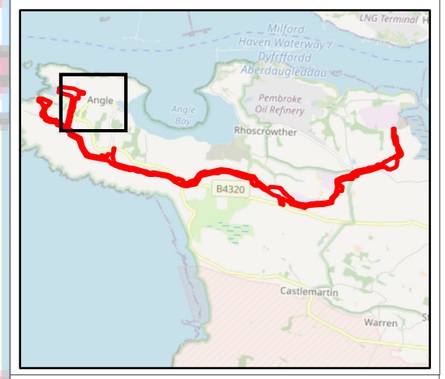
- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 20m Buffer around Track-out Route
- 50m Buffer around Track-out Route
- 350m Buffer for Human Receptors
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor



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Scale 1:5,000 @ A3

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Environmental Statement

Figure 26.4b

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date:	Drawn by:	Checked by:	Version:
09/12/2021	AD	ES	V2

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185000

N

West Pill

West Angle Bay

North Studdock

185000

KEY

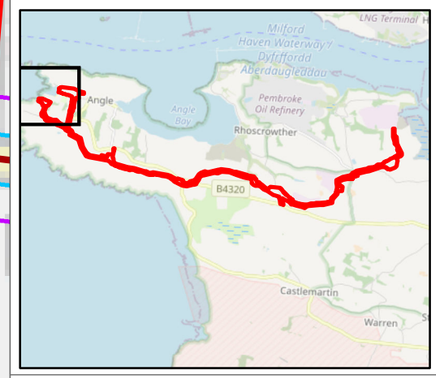
- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 20m Buffer around Track-out Route
- 50m Buffer around Track-out Route
- 350m Buffer for Human Receptors
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor



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Scale 1:5,000 @ A3

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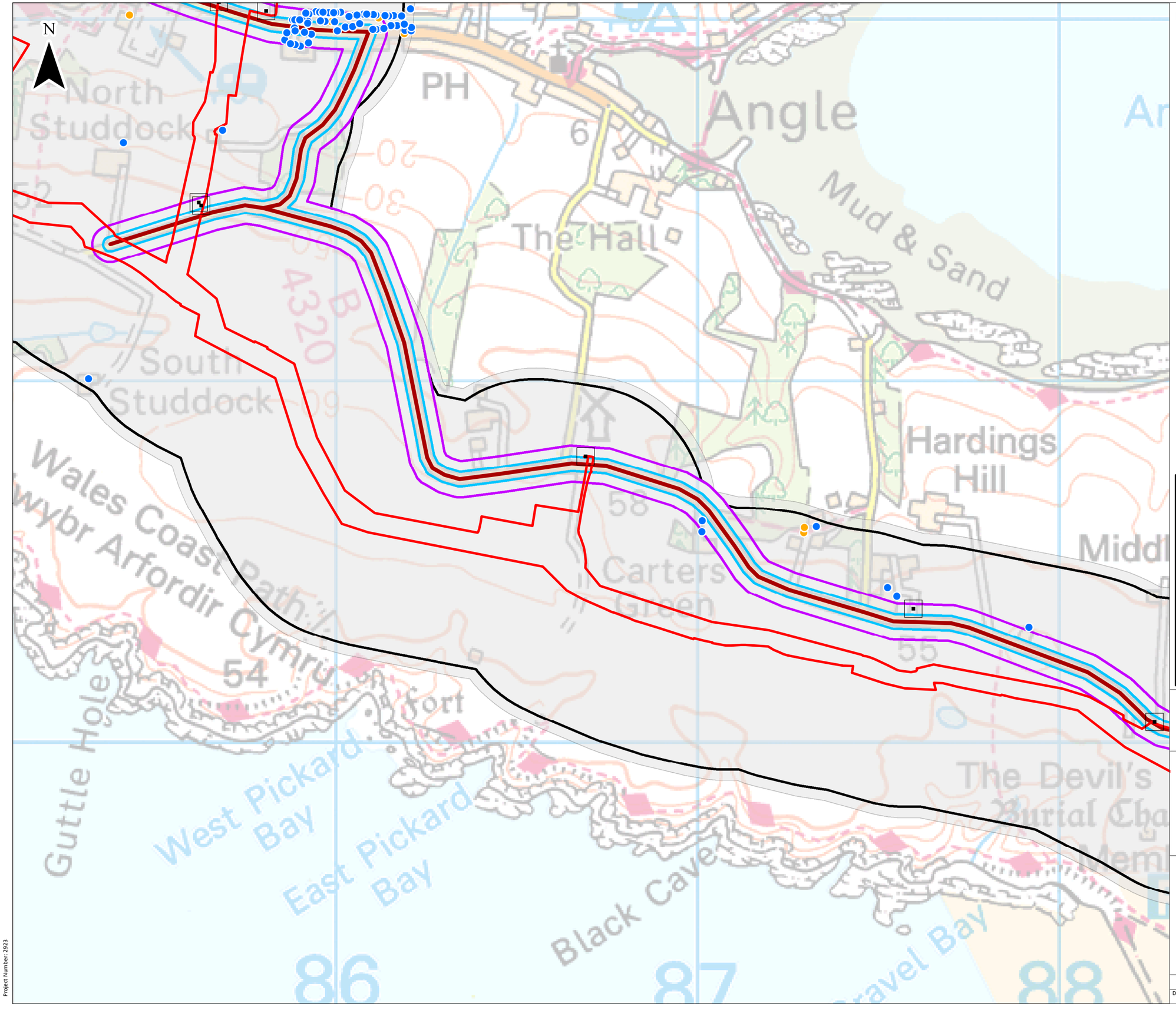
Figure 26.4c

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date:	Drawn by:	Checked by:	Version:
09/12/2021	AD	ES	V2

Project Number: 2923



KEY

- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 20m Buffer around Track-out Route
- 50m Buffer around Track-out Route
- 350m Buffer for Human Receptors
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor

0 140 280 m

Scale 1:10,000 @ A3

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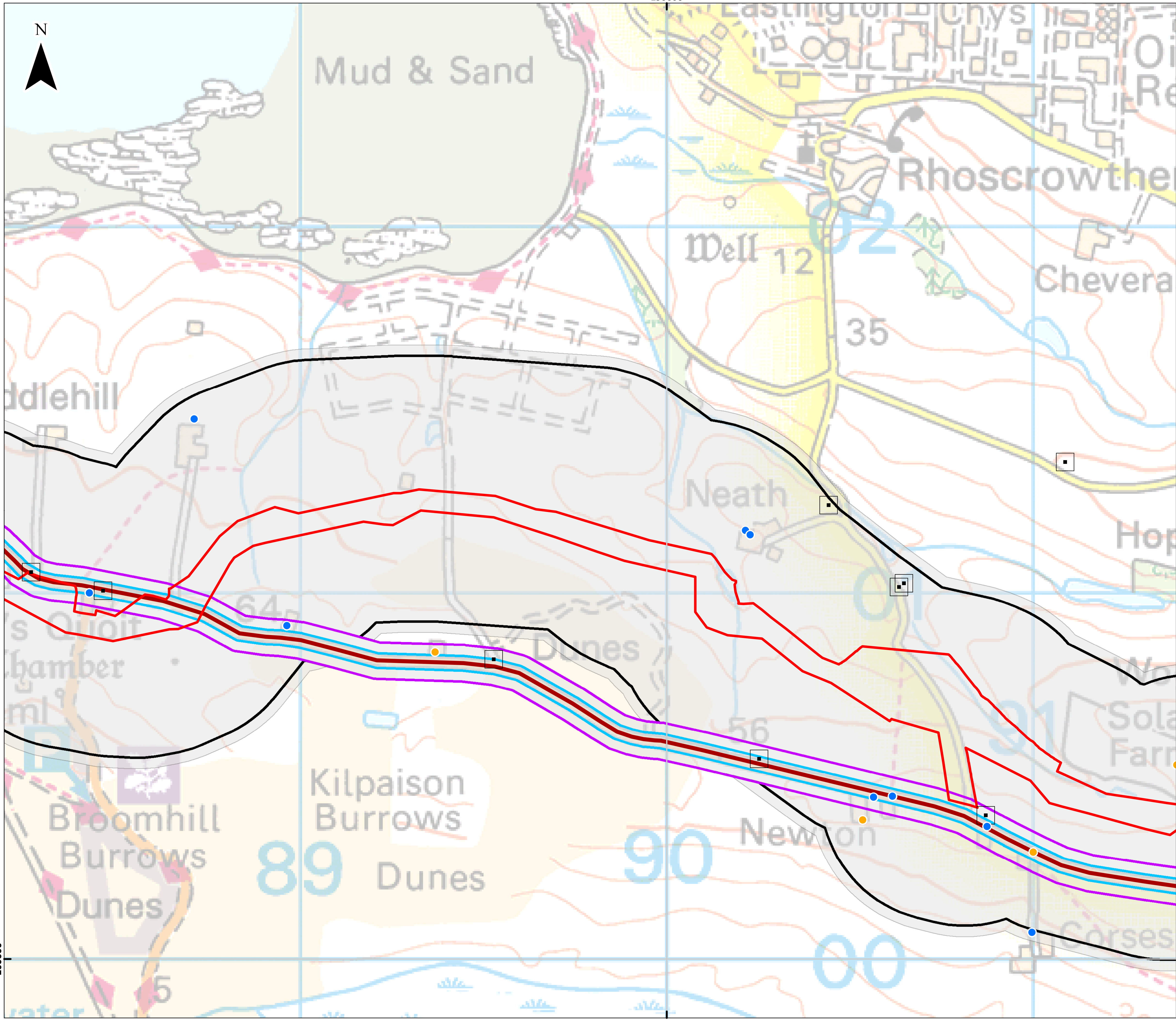
Figure 26.4d

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date:	Drawn by:	Checked by:	Version:
09/12/2021	AD	ES	V2

Project Number: 2923



KEY

- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 20m Buffer around Track-out Route
- 50m Buffer around Track-out Route
- 350m Buffer for Human Receptors
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor

0 140 280 m

Scale 1:10,000 @ A3

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Figure 26.4e

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date: 09/12/2021	Drawn by: AD	Checked by: ES	Version: V2

Project Number: 2923

N

200000

KEY

- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 20m Buffer around Track-out Route
- 50m Buffer around Track-out Route
- 350m Buffer for Human Receptors
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor

0 140 280 m

Scale 1:10,000 @ A3

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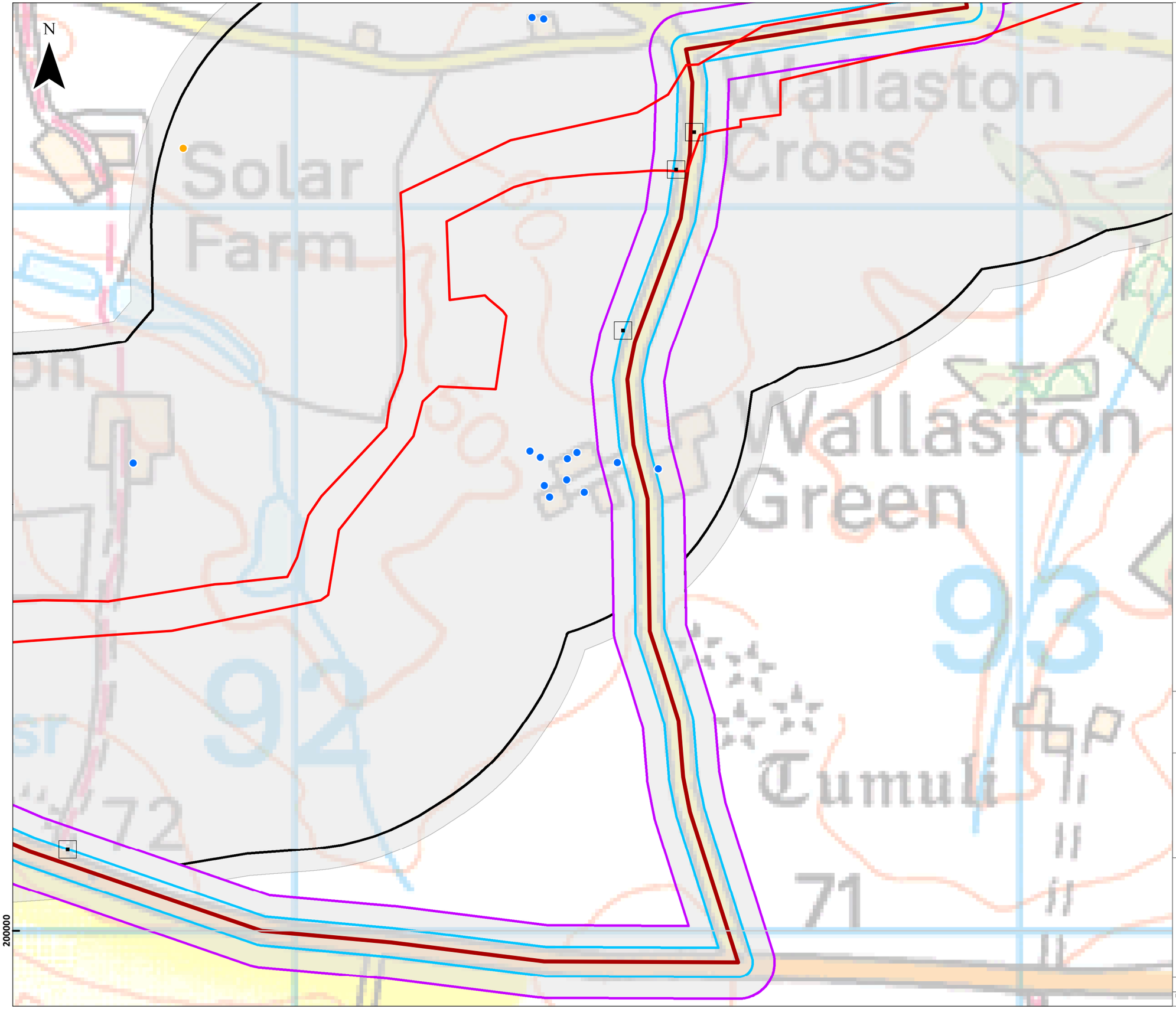
Figure 26.4f

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date:	Drawn by:	Checked by:	Version:
09/12/2021	AD	ES	V2

Project Number: 2923



KEY

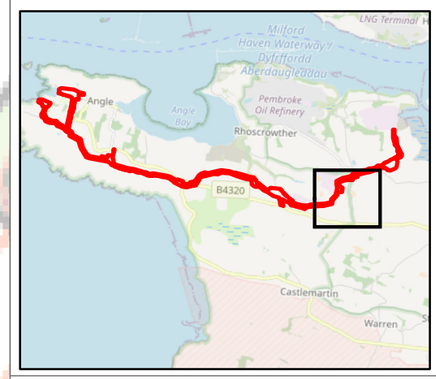
- Consent Boundary
- Trackout Route
- Indicative Access Points

Study Areas

- 20m Buffer around Track-out Route
- 50m Buffer around Track-out Route
- 350m Buffer for Human Receptors
- 380m Buffer for Human Receptors

Receptors

- Residential Receptor
- Commercial Receptor



0 110 220 m

Scale 1:5,000 @ A3

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Figure 26.4g

Human Receptors within Assessment Zones

Geodetic Parameters: British National Grid

Date:	Drawn by:	Checked by:	Version:
09/12/2021	AD	ES	V2

Project Number: 2923

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