

Portland energy recovery facility

Environmental statement Technical appendices

Traffic and transport



Portland energy recovery facility

Environmental statement
Technical appendix L:
Traffic and transport
(part 1 of 2)

Transport assessment

Portland ERF

Powerfuel Portland Limited

Transport Assessment Environmental Statement Appendix L1





Portland ERF

Transport Assessment

Job Title	Portland ERF
Project Number	0979
Date	27 August 2020
Revision	Final
Client	Powerfuel Portland Limited
Prepared by	S Davenport
Checked by	I Awcock
Authorised by	I Awcock
File Reference	P:\0979 Portland Port ERF\C Documents\Reports\0979 - Portland Port ERF - Transport Assessment.docx

Kensington Court
Woodwater Park
Pynes Hill
Exeter
EX2 5TY

Tel: 01392 409007



Contents

1	Introduction	1
2	Background & Policy	3
3	Existing Conditions	. 13
4	Site Accessibility	. 25
5	Development Proposals	. 30
6	Trip Generation & Distribution	. 34
7	Traffic Impact Assessment	. 50
8	Framework Travel Plan	. 57
9	Summary and Conclusions	. 63

Appendices

Appendix A Drawings and Figures

Appendix B Traffic Data

Appendix C PIA Data

Appendix D Bus Timetables

Appendix E Proposed Masterplan

Appendix F TRICS Data

Appendix G Census Data

Appendix H Travel Plan Implementation Strategy



1 Introduction

- 1.1 Awcock Ward Partnership (AWP) have been commissioned by Powerfuel Portland Limited to undertake a Transport Assessment to support a detailed planning application for a merchant Energy Recovery Facility on a brownfield site within the existing and operational Portland Port.
- 1.2 The site has previously been granted planning permission for an energy plant proposed to receive and process rubber crumb from life expired vehicle tyres and/or with vegetable oils, which would be used as fuel.
- 1.3 The location of the proposed development site is shown on Figure 1.1 below:

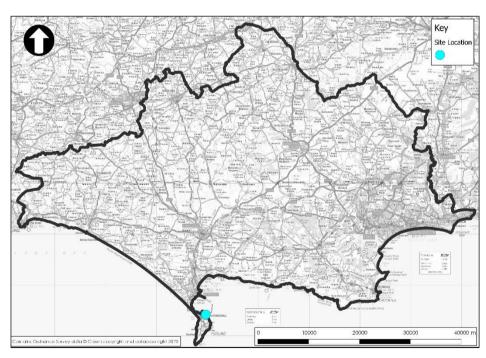


Figure 1.1 - Site Location – Wide Area

1.4 This report has been prepared broadly in accordance with the DfT/DCLG 'Guidance for Transport Assessments' (GTA March 2007) and Planning Practice Guidance published in connection with the National Planning Policy Framework. It should be noted that although GTA has been formally withdrawn and replaced with NPPG the content is still

0979 – Portland ERF Page 1 of 66



- acknowledged as providing useful detailed guidance for the preparation of Transport Assessments.
- 1.5 Formal scoping discussions, including an ES Scoping Report, have also been held with Local Highway Authority officers as well as Highways England which has defined the highway links to be considered in the impact assessment and the methodology for assessment of traffic impacts.
- 1.6 The structure and content of the report comprises the followina:
- Summary of relevant transport policy (local and national);
- Review of existing transport infrastructure and services;
- Review of the accessibility of the site to local facilities and public transport opportunities;
- Summary of the development proposals and access arrangements;
- Anticipated vehicular trip generation for the proposed development; and
- An assessment of potential traffic impact on the local road network.
- 1.7 The report also includes a Framework Travel Plan, setting out the proposed strategy to promote sustainable transport choices for journeys to/from the development.
- 1.8 The final chapters of the Transport Assessment set out a summary of the key issues and conclusions on the highways impact of the proposed development.
- 1.9 This Transport Assessment is prepared as part of an EIA and should be read alongside Ch11 of the Environmental Statement.

0979 – Portland ERF Page 2 of 66



2 Background & Policy

National Policy

- 2.1 A revised National Planning Policy Framework (NPPF) was published in June 2019. It sets out the Government's planning policies for England and how they are expected to be applied. Amongst others, these revised Framework replaces the original NPPF that superseded PPG13 Transport and provides the single national transport planning policy.
- 2.2 Paragraph 10 states that 'at the heart of the Framework is a presumption in favour of sustainable development'. Paragraph 11 of the NPPF expands on this point and declares that 'plans and decisions should apply a presumption in favour of sustainable development', in relation to decision making the Framework states that this means:
 - Approving development proposals that accord with an up-todate development plan without delay; or
 - Where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:
 - The application of polices in this Framework that protect areas of assets of particular importance provides a clear reason for refusing the development proposed; or
 - Any adverse impact of doing so would significantly and demonstrably outweigh the benefits, when assessed against the polices in this Framework taken as a whole.
- 2.3 Paragraph 118 states that '[Planning] decisions should give substantial weight to the value of using suitable brownfield land within settlements for home and other identified needs'.
- 2.4 Section 9 of The Framework specifically considers promoting sustainable transport. The Framework acknowledges that 'Transport issues should be considered from the earliest stages of plan-making and development proposals'.
- 2.5 In terms of parking the NPPF states in paragraph 105 that in setting local parking standards for residential and non-residential development, local planning authorities should take into account the following:

0979 – Portland ERF Page 3 of 66



- The accessibility of the development;
- The type, mix and use of development;
- The availability of and opportunities for public transport;
- Local car ownership levels; and
- The need to ensure an adequate provision of spaces for charging plug-in and other ultra- low emission vehicles.
- 2.6 Paragraph 106 of the Framework states that 'Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local network, or for optimising the density of development in city and town centres and other location that are well served by public transport'.
- 2.7 The Framework states in Paragraph 109 that a 'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.' Paragraph 111 requires that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment.

National Planning Practice Guidance (NPPG)

- 2.8 On 6 March 2014 the former Department for Communities and Local Government (DCLG) launched a suite of planning practice guidance to bring together relevant material for England in an accessible and usable way. As well as other planning matters, the specific guidance was set out on 'Travel Plans, Transport Assessments and statements in decision-making.'
- 2.9 The guidance states that these documents should:

"primarily focus on evaluating the potential transport impacts of a development proposal" and that they "can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework."

0979 – Portland ERF Page **4** of **66**



2.10 The guidance also states that:

"The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts. Travel Plans can play an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development."

- 2.11 The key principles that should be taken into account when preparing a Travel Plan, Transport Assessment or Statement are also defined in the guidance. This states that Travel Plans, Transport Assessments and Statements should be:
 - proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;
 - established at the earliest practicable possible stage of a development proposal;
 - be tailored to particular local circumstances (other locallydetermined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);
 - be brought forward through collaborative ongoing working between the Local Planning Authority/ Transport Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities).
 - 2.12 The NPPG is currently in the process of being revised with documents being published continually to respond to changes that occur.

National Planning Policy for Waste

2.13 The National Planning Policy for Waste (NPPW) provides the national guidance for waste management. It states in terms of transport that waste planning authorities should assess each site based on:



'the capacity of existing and potential transport infrastructure to support the sustainable movement of waste, and products arising from resource recovery, seeking when practicable and beneficial to use modes other than road transport'

2.14 It also states within the location criteria that:

f. traffic and access

Considerations will include the suitability of the road network and the extent to which access would require reliance on local roads, the rail network and transport links to ports.

Bournemouth, Poole and Dorset Local Transport Plan (2011-2026)

2.15 The Bournemouth, Poole and Dorset Local Transport Plan 2011-2026 (LTP3) is still in place following Dorset local government reorganisation and sets out the overarching vision for the Dorset area as follows:

"For a safe, reliable and accessible low carbon transport system for Bournemouth, Poole and Dorset that assists in the development of a strong low carbon economy, maximises the opportunities for sustainable transport and respects and protects the area's unique environmental assets."

- 2.16 LTP3 outlines 7 key approaches to achieving the vision as follows:
 - 1. Reducing the need to travel
 - 2. Managing and maintaining the existing network more efficiently
 - 3. Active travel and "greener" travel choices
 - 4. Public transport alternatives to the car
 - 5. Car parking measures
 - 6. Travel Safety Measures
 - 7. Strategic Infrastructure Improvements
- 2.17 Implementation Plans have been introduced to set out three year programmes of actions and schemes that link Local Transport Plan priorities with available financial resources for delivery.
- 2.18 Additionally, a number of technical documents have been prepared in order to assist with the implementation of the Local Transport Plan. This includes the 2011 Car Parking Study as summarised below:

0979 – Portland ERF Page 6 of 66



Dorset Waste Plan

- 2.19 The Bournemouth, Christchurch, Poole and Dorset Waste Plan 2019 (the waste plan) was adopted by Dorset Council and BCP Council on the 31st December 2019.
- 2.20 This new waste plan provides the policy framework to determine planning application for waste management facilities up to 2033.
- 2.21 A review of the policies set out in this newly adopted waste strategy is set out in the Planning Statement prepared in support of this application by Terence O'Rourke. Policy 12 covers transport and access.

Parking Guidance

2.22 Dorset Council has published a document entitled Non-Residential Parking Guidance. Within this guidance document it states that:

These are the suggested car and cycle parking guidelines that will meet the likely and operational requirements of various establishments and business uses. The figures should be interpreted as an initial, pragmatic, County-wide guide.

2.23 The suggested level of parking for B2 & B8 land class use are shown below:

B2 General Industrial		1 per 30m² + 1 HGV space per 250m²	1 per 500m²	
B8	General Warehouse and Distribution	1 per 200m² + 1 HGV space per 250m²	1 per 500m²	

Local Policy

2.24 On the 1st April 2019 Dorset County Council and the local councils merged to form a unitary authority called Dorset Council. There is currently no unified Local Plan for the new Council, therefore planning policy for each specific area will relate to the previous local plans and local plan reviews prepared by the former District Councils.

0979 – Portland ERF Page **7** of **66**



West Dorset, Weymouth and Portland Adopted Local Plan

- 2.25 West Dorset District Council and Weymouth & Portland Borough Council worked to prepare a joint Local Plan setting out the long-term planning strategy for the area up to the year 2031.
- 2.26 This local plan was adopted by West Dorset District Council on the 22nd October 2015 and by Weymouth and Portland Borough Council on the 15th October 2015.
- 2.27 With regards to Portland Port, the adopted Local Plan states

8.3.3 "Transforming Dorset", the Strategic Economic Plan (SEP) produced by the Dorset Local Enterprise Partnership in March 2014, has identified Portland Port as an example of the type of opportunity that could achieve "transformational growth" subject to securing investment of the scale proposed by the document. The SEP proposes that the port could achieve far reaching development of unique natural port assets supporting industrial development, freight, exports and bringing a radically larger sector of the cruise market to the Dorset tourist economy.

that:

2.28 The adopted plan goes on to say that:

The port is identified as a key employment site and associated policies in the plan allow for its protection and the provision of employment (ECON 1 and ECON 2). These employment policies support the expansion of existing employment sites subject to other policies within the plan. Additional land may be required within the port for sustainable development and these policies cater for the port's need for long-term growth.

0979 – Portland ERF Page 8 of 66



2.29 Policy COM7 states that:

COM7. CREATING A SAFE AND EFFICIENT TRANSPORT NETWORK

- i) Development that generates significant movement should be located where the need to travel will be minimised and the use of sustainable transport modes including public transport, walking and cycling can be maximised.
- ii) Development should be located where the volume of traffic likely to be generated can be accommodated on the local highway network without exacerbating community severance.
- iii) Development will not be permitted where the residual cumulative impacts on the efficiency of the transport network are likely to be severe
- iv) Development will not be permitted unless it can be demonstrated that it would not have a severe detrimental effect on road safety, or measures can be introduced to reasonably mitigate potentially dangerous conditions.
- v) The delivery of a strategic cycle network and improvements to the public rights of way network will be supported. Development should not result in the severance or degradation of existing or proposed routes. Where development degrades the attractiveness of a route, compensatory enhancements will seek such that there is a net improvement to the public right of way network. Where development proposals provide the opportunity to significantly improve links within the public rights of way network, an appropriate link through the development will be required.

Committed Development

- 2.30 Through the EIA scoping process, Dorset Council has identified a number of sites that should be included as committed development.
- 2.31 The sites that have been identified are:
 - Ocean Views, Hardy Complex, Castle Road, Portland (Phase 2): redevelopment of former naval accommodation block into 157 apartments, together with the development of 191 new build homes, with associated car parking (application reference: 02/00703/FUL, as amended);
 - Royal Manor Arts College, Weston Road, Portland: demolition of existing buildings and erection of 98 dwellings (application reference: WP/19/00919/OUT);

0979 – Portland ERF Page 9 of 66



- Verne Common Road and Ventnor Road, Portland: development of vacant land by the demolition of garage and erection of 25 dwellings (application reference: WP/18/00662/FUL)
- Southwell Primary School, Sweethill Lane, Portland: demolition of existing buildings and construction of up to 58 dwellings (application reference: WP/17/00866/OUT)
- Ferrybridge Inn, Portland Road, Weymouth: demolition of existing public house and construction of up to 22 residential units (application reference: WP/14/00929/OUT)
- Disused Quarry Works Stockyard, Bottom Coombe, Park Road, Portland: development of approximately 62 dwellings (application reference: WP/14/00591/OUT)
- Redundant Buildings at Bumpers Lane, Portland: demolition of existing redundant industrial buildings and erection of approximately 64 dwellings (application reference: WP/14/00330/OUT)
- Plot X, Mulberry Avenue, Portland: erection of two blocks of two storey business units comprising three B1 units and six B8 units (total floorspace 766 sqm) with associated parking and landscaping (application reference: WP/18/00940/FUL)
- Plot M1B, Hamm Beach Road, Portland: erection of three industrial and commercial buildings (B1, B2 and B8, total floorspace 2,879 sqm) and associated external works (application reference: WP/17/00631/FUL, as amended).
- 2.32 The committed development also includes the remaining development (and associated planning permissions) permitted under the 1997 Portland Harbour Revision Order, which is as follows:
 - Project Osprey: construction of two animal feed storage and distribution warehouses, each 140m x 45m x 20m, and an office building 16m x 4m x 5.15m, to handle 250,000-300,000 tonnes per year (Council reference: W/19/00514/SCRE) – currently under construction
 - Project Inner Breakwater and Camber Area Alterations: development of operational land for the purposes of shipping and in connection with the embarking, disembarking, loading, discharging or transport of passengers, livestock or goods, including a new berth apron in the Crane Berth Apron Operational Area and a new yard pavement at the Camber Operational Yard to enable the berthing and handling of ships

0979 – Portland ERF Page 10 of 66



up to 120 m long, their cargoes and passengers (Council reference: WP/15/00328/PD)

- Open storage of waste products, including waste wood and metal, on the Parade Ground area of the Rifle Range
- High Speed Ferries: a cross-Channel passenger / car high speed ferry operating 2-3 daily sailings (round trips) over the 26-week summer season (April-October) and weekend sailings (Friday, Saturday and Sunday) over 20 weeks during the winter season (permitted under the RoRo ferries element of the HRO, but currently seeking finance)
- The HRO grants permitted development rights for B1/B2/B8 development on several areas of land at the Port that have yet to be developed, areas Port 2, Port 5, Port 6 and Port 7. While no specific proposals are available for these areas, for the purposes of the assessment it is assumed that each area could be developed for single storey warehouse buildings similar to those proposed at Project Osprey. Note Port 3 has already been developed.
- Landside aquaculture: construction of a warehouse building for aquaculture, producing 200-300 tonnes of fish, on a site measuring 135m x 37m (application references: WP/14/01033/OUT and WP/16/00150/RES) these permissions have lapsed, but the site is being marketed as a potential development site for a similar use so, for the purposes of the assessment, it is assumed a similar development could be constructed on the site in the future
- 2.33 In addition to the 1997 HRO development, it includes development (and associated planning permissions) permitted under the 2010 Portland Harbour Revision Order, as follows:
 - New berthing faces to the north and east of New Quay and Coaling Pier Island (Works 1 and 5) and new berthing faces to the retaining structures to the south and west of Queen's Pier (Work 7) by the construction of concrete blockwork quay walls and/or piled and suspended deck sections and/or rock armoured rubble mound retaining embankments
 - Reclamation of as much of the foreshore and seabed as is required for the above works (Works 2, 6 and 8)
 - Two 30m wide floating linkspans commencing on the new northern and eastern faces of the berthing faces adjacent to the shoreward arm of Queen's Pier (Work 3)

0979 – Portland ERF Page 11 of 66



- A 30m wide floating linkspan commencing on the eastern face of Work 7 (Work 9)
- A mooring dolphin lying 70m to the east of the eastern face of Work 1, with bearing piles, mooring structures and reinforced concrete heads, connected to Work 1 by a steel access walkway (Work 4)
- Two lines of mooring dolphins up to 250m long and up to 70m apart, with bearing piles, mooring structures and reinforced concrete heads, connected by steel walkways and the permanent mooring at the dolphins of a floating dry-dock (Work 10)
- A reinforced concrete or steel pontoon providing access to and from Work 10 (Work 11)

0979 – Portland ERF Page **12** of **66**



3 Existing Conditions

Context & History

- 3.1 The development site is located within Portland Port on the eastern side of the Isle of Portland. The island is traditionally an industrial area with a large concentration of stone quarries. There are currently six active stone quarries on the Island. Portland Harbour has a long history, with the harbour being used as a Port and anchorage since before Tudor times.
- 3.2 The original naval port at Portland was constructed between 1837 and 1890 to provide a Harbour of Refuge and coaling station for the steam navy. Portland and its harbour were designated as HM Naval Base Portland in 1923 and the base played prominent roles in both World Wars and the Cold War.
- 3.3 From 1958, Portland was home to Flag Officer Sea Training. During this time, the site area was dominated by a weapons research establishment building in the south east, with other buildings dedicated to mechanical repair facilities for military vehicles. The naval base and two major weapons research establishments were closed in 1995/96 and Portland Port Ltd began the transformation of the harbour into a commercial port.
- 3.4 The Port has been operated by Portland Port Group since the withdrawal of the Royal Navy as a commercial port. Activities at the Port include, amongst other things, the import of bulk materials (e.g. animal feed), a cruise ship terminal, and anchorage for various visiting vessels.
- 3.5 A Harbour Revision Order (HRO) was submitted in 1997 and again in 2010. The 2010 HRO included the provision for the construction of new berths and hardstanding this would allow commercial and shipping activity to increase at the Port. The Harbour Revision Orders allowed for a capped number of trips to be generated by the Port onto the local road network during the peak network hours, 08:00-09:00 & 17:00-18:00.

0979 – Portland ERF Page 13 of 66



- 3.6 Project Osprey, the construction of two animal feed storage and distribution warehouses (now under construction), was submitted by Portland Port in 2017 and within this application analysis was undertaken to ascertain the headroom available for development compared to that set out in the HRO. In 2017 there were 375 am peak trips remaining and 316 pm peak trips remaining within the headroom of the agreed 1997 & 2010 HRO's.
- 3.7 The location of the site with respect to the local road network is shown on Figure 3.1 below:

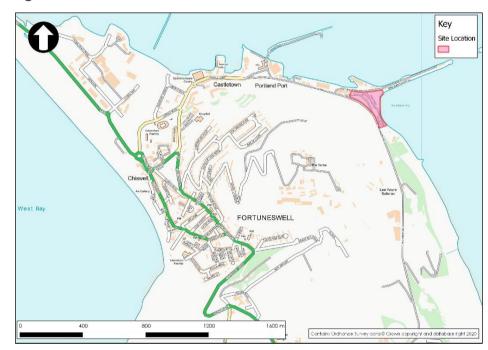


Figure 3.1: Site Location – Local Area

Local Road Network

- 3.8 The main and only access to the Port from the public highways is at the eastern end of Castletown, which in turn provides a link to the recently constructed Lerret Road and then onto Portland Beach Road around 1km from the main Port access.
- 3.9 Castletown is a wide street that has on-street parking whilst still maintaining two-way vehicle flow, it carries all traffic to and from the Port.

0979 – Portland ERF Page 14 of 66



- 3.10 Approx. 500m from the Port entrance Castletown transitions into Lerret Road which was recently constructed as part of a regeneration area with two-way working. Lerret Road was constructed when numerous improvement works were undertaken to the road infrastructure of the island in preparation for the 2012 Olympic Games.
- 3.11 Portland Beach Road is the sole access on and off the island and handles all the traffic from Portland, included the stone quarries and all Port traffic. It is a modern road with improvements undertaken in preparation for the 2012 Olympic Games and in relation to regeneration.
- 3.12 The Isle of Portland has traditionally been, and remains, an industrial area. There are numerous active stone quarries on the island that produce regular HGV trips throughout the day in addition to the existing Port HGV movements. Dorset Council has therefore implemented a one way system through Weymouth for all HGV deliveries accessing the Island.
- 3.13 The two routes that form the one-way system through Weymouth for freight to/from the Island are set out below and illustrated on Figure 3.2 in Appendix A:

Journeys North – away from the Island

- 3.14 From Foords Corner Roundabout HGV traffic travels north (away from Portland) via the B3156. From here the route is as follows:
 - North on the B3156 passing through the mini-roundabout with Wyke Road;
 - Approx. 1.5km from the B3156/Wyke Road Roundabout the B3156 forms a signalised junction with Chickerell Road. Vehicles continue north west from this junction along Chickerell Road;
 - The route remains on Chickerell Road for approx. 1km before turning east onto the Chickerell Link Road via a signalised junction;
 - Vehicles continue travelling east along the Chickerell Link Road which becomes Hampshire Road. 1.2km from the Chickerell Link Road/Chickerell Road signalised junction the route continues over a roundabout onto Granby Way;

0979 – Portland ERF Page **15** of **66**



 After 1km Granby Way forms a three-arm roundabout with the Weymouth Road. This roundabout is the northern terminus of the one-way system.

<u>Journeys South – Towards the Island</u>

- 3.15 Travelling south on the A354 from the Weymouth Way/Granby Way Roundabout along Weymouth Way. From here the route is as follows:
 - Approx. 1km to the south Weymouth Way/Granby Way Roundabout Weymouth Way becomes Westwey Road. Vehicles travelling towards Portland pass through the Westwey Road/Abbotsbury Road junction and continue south;
 - Vehicles then remain on Westwey Road, which is classified as the A354, and pass through a number of junctions as they continue south west. The A354 transitions into Buxton Road.
 - Vehicles remain on Buxton Road which then leads to the Buxton Road/B3156 roundabout where the one-way system started.
 - From here all vehicles travel onto the Island via Portland Beach Road.
- 3.16 It should be noted that the local Highway Authority are considering reversing this one-way system, which would mean deliveries would travel to the site via the Chickerell route and away via the Buxton Road Route.
- 3.17 To the north, from Granby Way/Weymouth Way Roundabout all vehicles travel along Weymouth Way. This link travels north, passing through a number of roundabouts, for approx. 2km when it transitions into the Weymouth Relief Road.
- 3.18 The Weymouth Relief Road (A354) forms part of Dorset's designated HGV network and is a modern highway that has crawler lane sections travelling uphill. The A354 provides a direct connection to the A35(T), via Stadium Roundabout at Dorchester, around 6km to the north.
- 3.19 The A35(T) is a trunk road that provides a connection to Bournemouth, Poole, Dorchester and Exeter as well as facilitating access to other major routes including the A303(T), A30(T) and the A31(T).

0979 – Portland ERF Page 16 of 66



3.20 The one way system in place only applies to HGV's. There are no restrictions on the routing that non-HGV's can take to access the Island.

Existing Traffic

- 3.21 Travel restrictions were implemented by the Government in the week commencing 16th March 2020 in response to the Coronavirus COVID-19 pandemic. However, even with the lifting of some restrictions on week commencing 1st June traffic data collected at this time is still not considered to be representative due to large numbers of the work force being furloughed, or working from home.
- 3.22 Therefore, in order to establish the baseline traffic conditions, existing traffic flows have been obtained from Dorset Council for a number of locations. All survey data was taken for the same two weeks in November 2019 to ensure that comparison between the different survey locations was valid.
- 3.23 Survey data was collected for a number of locations, and the following Dorset Council Count Locations have been included:
 - Portland Beach Road (ref: 307);
 - A354 Buxton Road (in the vicinity of All Saints Church of England Academy) (2017 Dorset Council Survey);
 - A354 Buxton Road Boot Hill (ref: 810);
 - A354 Weymouth Way (south of Granby Way Roundabout) (ref: 913); and
 - A354 Weymouth Relief Road at Stadium Roundabout (Highways England 2017 Survey).
- 3.24 Additional traffic flow data has been derived on Castletown and Portland Road based on flows through the gate at the Port which are permanently monitored.
- 3.25 A copy of all traffic survey data is included in Appendix B of this Transport Assessment. Table 3.1 below shows the daily traffic flow on Portland Beach Road:

0979 – Portland ERF Page 17 of 66



Table 3.1: Portland Beach Road – Traffic Flows – 2019 Survey

	AM Peak (0800-0900)	PM Peak (1700-18000	Total Daily		
Northbound	789	626	8,981		
Southbound	669	828	8,988		
All Directions	1,458	1,454	17,969		
% HGV	13.4%	7.3%	11.2%		

- 3.26 The count results indicate that there are on average around 24 vehicles a minute on Portland Beach Road in both peak hours. In the busier AM Peak there would be around 190 HGV's travelling along Portland Beach Road, or around three a minute.
- 3.27 Table 3.2 summarises the recorded traffic flows along the A354 Buxton Road, in the vicinity of the All Saints Church of England Academy:

Table 3.2: A354 Buxton Road – Traffic Flows – 2017 Survey Year

	AM Peak (0800-0900)	PM Peak (1700-18000	Estimated Total Daily ¹			
Northbound	422	515	5,622			
Southbound	330	455	4,710			
All Directions	752	970	10,332			
% HGV	3.9%	1%	2.5%			
Derived from other traffic surveys on A354 Buxton Road -site ref 810						

- 3.28 The count results indicate that there were on average around 15 vehicles a minute on Buxton Road in the vicinity of All Saints Church of England Academy and Wyke Regis Infant and Nursery School in the busier PM peak hours.
- 3.29 Table 3.3 summarises the recorded traffic flows along the A354 Buxton Road Boot Hill:

0979 – Portland ERF Page 18 of 66



Table 3.3: A354 Buxton Road - Boot Hill – Traffic Flows – 2019 Survey Year

	AM Peak (0800-0900)	PM Peak (1700-18000	Total Daily			
Northbound	1142	738	11,194			
Southbound	643	912	10,452			
All Directions	1,785		21,646			
% HGV ¹	11.5%	5.9%	8.7%			
1. Derived from Site 910 Granby Way						

- 3.30 The count results indicate that there are on average around 29 vehicles a minute on Buxton Road at Boot Hill in both peak hours.
- 3.31 Table 3.4 summarises the recorded traffic flows along the A354 Weymouth Way (South of Granby Roundabout):

Table 3.4: A354 Weymouth Way (South of Granby Roundabout) – Traffic Flows – 2019 Survey Year

	AM Peak (0800-0900)	PM Peak (1700-18000	Total Daily		
Northbound	673	566	8,516		
Southbound	620	639	8,351		
All Directions	1,293	1,205	16,867		
% HGV	11.5%	5.9%	8.7%		

- 3.32 The existing Dorset Council ATC shows that, on average there are around 20 vehicles per minute on Weymouth Way in both peak hours. During the AM 11.5% of these vehicles are HGVs.
- 3.33 Table 3.5 summarises the recorded traffic flows at the Stadium Roundabout A354 Arm:

0979 – Portland ERF Page 19 of 66



Table 3.5: Stadium Roundabout – A354 Arm – Traffic Flows – 2017 Survey Year

	AM Peak (0800-0900)	PM Peak (1700-18000	Total Daily (06:00- 20:00)		
Northbound	1,058	1,297	13,054		
Southbound	1,283	1,021	12,963		
All Directions	2,341	2,318	26,017		
% HGV	6%	2%	5%		

- 3.34 The survey conducted by Highways England in 2017 shows that, on average there are 40 vehicles per minute passing along the A354 Arm of Stadium Roundabout with approx. 6% being HGV traffic in the busier AM Peak.
- 3.35 A TEMPro growth rate will be applied in order to ensure that the surveys are comparable in a future year.
- 3.36 All the locations under assessment demonstrate a relatively high level of existing traffic and on most links a higher than average level of HGV traffic expected to be travelling to access the industrial areas on Portland.

Pedestrian and Cycle Facilities

- 3.37 Pedestrian access to the Port is provided by a continuous footway along Castletown, which in turn provides access to the Fortuneswell area of Portland via Castle Road and Victory Road.
- 3.38 Victory Road connects to Victoria Square where a shared pedestrian/cycle route continues north along the western boundary of Portland Beach Road. This shared foot/cycleway connects to The Rodwell Trail once on the mainland, this trail is part of the South West Coast Path and also National Cycle Network Route 26. The Rodwell Trail runs between Wyke Regis and the centre of Weymouth along the former Portland Railway Line.
- 3.39 National Cycle Route 26 provides a route off-road, alongside Portland Beach Road, or on quiet roads between Victoria Park Gardens in Fortuneswell and Weymouth. From

0979 – Portland ERF Page **20** of **66**



- Weymouth the route continues north towards Dorchester where it connects into the wider National Cycle Network.
- 3.40 Easton, Weston and Southwell can be accessed via a continuous off road path from New Road. This path connects to Easton Lane where a footway is present and provides access to the centre of Easton and onto Weston and Southwell.
- 3.41 A cycle route is present on the A354 New Road, and is a combination of advisory cycle land and cycleway. From Yeates Roundabout Priory Road/Easton Lane & Wide Street it provides access to the wider Island
- 3.42 In addition to the wide ranging footway provision there is a wider network of public rights of way (PRoWs) on the Island. Castletown also provides a link to PRoW footpath \$3/76 this Public Right of Way follows the route of the former Merchants Incline Railway and provides a more direct access route to Fortuneswell as well as connections to the wider Island.

Accident History

- 3.43 Personal Injury Accident (PIA) data was acquired from Dorset Council covering the highway network on the local road network around the Port. The data was obtained for the most recent 5-year period available (01/02/2015 31/01/2020). The PIA data, including the search area and a plot of all reported incidents, is included in Appendix C.
- 3.44 The data indicates that there has been a total of 48 incidents within the search area during the 5 year search period. Of the 48, 32 were categorised as 'slight', 14 were classed as serious and two were reported as fatal.
- 3.45 The records suggest that the first fatal incident occurred when a cyclist lost control whilst travelling along the pavement and fell off the kerb under a lorry. It is reported that the lorry then moved away and caused fatal injuries to the cyclist. No other vehicles were involved in the incident, the weather was dry, and it was in the hours of day light. This was the only reported fatal incident at this location in the search period.

0979 – Portland ERF Page **21** of **66**



- 3.46 The second fatal incident is reported to have occurred when a vehicle travelling east on Portland Beach Road has crossed the carriageway for an unknown reason and collided with a vehicle travelling the opposite direction. The road surface was damp and there was street lighting present. No other fatal incidents are reported to have occurred at this location in the search period.
- 3.47 The two fatal incidents occurred in different locations along Portland Beach Road with the records suggesting that no external factors were involved. The records do not suggest the apparent cause of these incidents was due to highway factors and therefore these two fatal incidents do not suggest a highway safety issue.
- 3.48 There were three reported serious incidents at Foords Corner Roundabout and in the vicinity of All Saints Church of England Academy. The first is suggested to have occurred when a pedestrian misunderstood a vehicles indication and was struck by the vehicle. The records suggest that the second incident occurred when a pedestrian ran into the road without looking and was struck by a motorcycle. The third serious incident is reported to have occurred when a vehicle overtook a cyclist and then proceeded to turn left across the path of the cyclist. Given the high traffic flow along this section of road this number of incidents does not suggest a specific highway safety problem.
- 3.49 There were a further three serious incidents in the vicinity of Portland Beach Road/Whitehead Drive Roundabout. The first is reported to have occurred when an overseas tourist looked the wrong way before crossing and was struck by a cyclist. The second is suggest to have occurred when the first vehicle has failed to see a second vehicle indicating to turn causing an overtaking vehicle to collide with it. The third incident is reported as having occurred when a vehicle lost control on Portland Beach Road and left the carriageway before colliding with a boat parked on the driveway. These three reported incidents are all isolated and do not suggest an inherent highway safety issue.
- 3.50 An additional five reported serious incidents occurred on Portland Beach Road during the search period. Two are

0979 – Portland ERF Page **22** of **66**



suggested to have occurred when motorcycles were overtaking vehicles and collided with oncoming traffic. The records suggest that one occurred when a drunk driver has struck a police vehicle and two are indicated to have been caused by vehicles striking the kerb and overturning onto the pavement.

- 3.51 It is reported that two serious incidents happened at the Victoria Square Roundabout. With the first occurring when one vehicle shunted another at the roundabout and the second is reported to have occurred when a vehicle strayed over the central line and collided with an oncoming vehicle.
- 3.52 The final serious incident in the search area occurred at the junction of Victory Road and Castle Road when a vehicle clipped a motorcycle as it was leaving the junction. This incident along with the two at Victoria Square does not suggest a highway safety deficiency at this location.
- 3.53 Throughout the plot area there was a total of 32 reported slight incidents. However this is not considered to be at a level to demonstrate a specific local highway safety issue given the traffic flow along Portland Beach Road. None of these slight incidents involved an HGV.
- 3.54 In conclusion, a review of the records for the previous 5 year period indicates that there are no areas of particular highway safety concern within the search area of Portland Beach Road and Castletown. The records also suggest that there was a single incident involving a Heavy Good Vehicle during the most recent 5 year search period.

Summary

- 3.55 The proposed development site is located within the operational Portland Port, on the Isle of Portland. The site is already subject to a planning permission for an energy plant that would be fuelled by life expired vehicle tyres and used vegetable oil.
- 3.56 HGV's access Portland via one of two routes, because a one-way system is operational through Weymouth. This

0979 – Portland ERF Page 23 of 66



- route is already well used by HGV's servicing the six active stone quarries on the island.
- 3.57 Data from the Dorset Council traffic surveys indicate that Portland Beach Road has a daily flow of just under 18,000 vehicles with 11.2% being HGV traffic.
- 3.58 A review of PIA data supplied by Dorset Council indicates that there are no patterns in accident history in Portland given the large number of vehicles that use Portland Beach Road. There is nothing to suggest any material safety issues or deficiency in highway infrastructure within the surrounding area of the Port.

0979 – Portland ERF Page **24** of **66**



4 Site Accessibility

4.1 This section of the report considers the accessibility of the site for employees in relation to local facilities and sustainable transport in the local area.

Local Amenities and Facilities

- 4.2 The Chartered Institution of Highways and Transportation document "Guidelines for Providing for Journeys on Foot" contains suggested acceptable walking distances for pedestrians for some common facilities. This document is intended to advise on planning for and providing for pedestrians, maintaining pedestrian infrastructure and promoting walking and as a result the distances stated in the document may be used for planning and evaluation purposes.
- 4.3 Table 4.1 below reproduces Table 3.2 from Guidelines for Providing for Journeys on Foot (GPJF) which shows the acceptable walking distances.

Table 4.1 – 'GPJF Table 3.2' - Suggested Acceptable Walking Distance

	Town Centres (m)	Commuting/ School/Sight- seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred maximum	800	2000	1200

- 4.4 In addition to this, section 4.4 of Manual for Streets also states that 'Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' walk (up to about 800m).'
- 4.5 Manual for Streets then goes on to say that 'However, this is not an upper limit and PP\$13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km.'

0979 – Portland ERF Page **25** of **66**



- 4.6 Figure 4.1 contained in Appendix A of this report, highlights the location of local facilities with respect to the development site. To provide context, boundaries indicating distances from the site boundary in 400m (or 5 minute walk) increments are also shown. Figure 4.2 indicates a wider area.
- 4.7 As highlighted on Figure 4.1, staff of the development will be able to access a range of local facilities on foot within an approximate 5, 10 and 15 minute walk of the site. Table 4.2 sets out the measured walking distance to each amenity from the site following the highway network (which is slightly longer due to the nature of the alignment of the local street pattern).

Table 4.2: Accessibility to Local Facilities

	Approximate Walking Distance (m/mins)									
Facility	0-400m	0-5 mins	400-800m	5-10 mins	800-1200m	10-15 mins	1200-1600m	15-20 mins	1600-2000m	20-25 mins
The Green Shutters Public House			٧							
Premier Convenience Store					V	/				
Osprey Leisure Centre					•					
Portland Hospital					v					
Co-op Food – Fortuneswell							~	/		
Victoria Square Bus Stops							~	/		
Lidl									٧	/

4.8 With reference to Table 4.1, Table 4.2 shows that within walking distance of the site there are a number of retail opportunities available, including a number of convenience shops and a leisure centre. These facilities provide staff at

0979 – Portland ERF Page **26** of **66**



- the plant opportunities to access these services via sustainable means during lunch breaks and other working breaks, as well as during their commute.
- 4.9 To provide context, boundaries indicating distances from the site boundaries of 2000m (or around 7 minutes cycling) increments are also shown. Figure 4.1 & 4.2 shown in Appendix A, indicates that the major residential areas of Easton, Weston, Fortuneswell on the island and Wyke Regis on the mainland can be reached within a cycle journey time of less than around 20 minutes.
- 4.10 In addition to this, the main residential areas of Portland are within approx. a half an hour walk via the wide ranging network of PRoW that are present on the Island.
- 4.11 Table 4.2 demonstrate that there are a range of facilities within close proximity to the site, including local amenities and convenience retail. The close proximity of these facilities provides the opportunity for staff at the development to make trips via sustainable modes of travel during working breaks or before and afterwork.

Public Transport - Bus

- 4.12 The closest bus stop to the development site is the 'Victoria Square Stops', where a stop is present serving both directions. This stop is approximately 20 minutes walk or (1km) from the development site
- 4.13 Table 4.4 below summarises the services available from these stops with approximate average frequency in each direction. A copy of the bus timetables is included in Appendix D.

0979 – Portland ERF Page **27** of **66**



Table 4.4: Existing Bus Services – 'Victoria Road Stops'

Service	Service Operator Route		Approximate Average Frequency			
			Mon-Fri	Sat	Sun	
1	First	Weymouth, Wyke Regis, Victoria Square , Easton, Southwell	2 services per hour	2 services per hour	2 services per hour	
Source: <u>ht</u>	tp://www.tra	velinesw.com/		Date:	21.04.2020	

- 4.14 Table 4.4 shows that there is a regular and frequent bus services to Weymouth and to the centre of Portland. As can be seen from the timetable in Appendix D, there are services available to/from each destination arriving before 9am and leaving after 5pm therefore offering a sustainable option for commuter trips.
- 4.15 In addition to this the first service arrives just after 05:00 and leaves after 23:00 meaning that there are opportunities for staff who would work night shifts to travel to the site via sustainable means.
- 4.16 The 1 service also provides access to the centre of Weymouth where rail services can be accessed.

Public Transport – Rail

- 4.17 A railway station is located within Weymouth, around a half an hour cycle (9km) from the development site.
- 4.18 From Weymouth Railway Station, South Western Railways operates a service every half an hour to London Waterloo via Dorchester, Bournemouth and Basingstoke amongst others.
- 4.19 In addition to this, Great Western Railway operates a service every two hours to Bristol Temple Meads via Yeovil and Westbury.

Summary

4.20 The proposed development is well located in respect to existing residential areas and other leisure and food retail

0979 – Portland ERF Page **28** of **66**



- amenities. A number of food retail shops are within around a 10 minute walk (approx. 800m).
- 4.21 The major residential areas of Easton, Weston, Fortuneswell on the island and Wyke Regis on the mainland can all be reached within around 20 minute cycle. The main residential areas of Portland, Fortuneswell and Easton, are within approx. a half an hour walk via the wide ranging network of PRoW that are present on the island.
- 4.22 The Island is served by a regular and frequent bus service to and from the mainland, this service runs in the early morning and late at night to enable staff working shifts to still travel sustainably.

0979 – Portland ERF Page **29** of **66**



5 Development Proposals

Introduction

5.1 The proposed development comprises an Energy Recovery Facility located within Portland Port, on the Isle of Portland.

Proposed development of an energy recovery facility with ancillary buildings and works including administrative facilities, gatehouse and weighbridge, parking and circulation areas, cable routes to ship berths and existing off-site electrical sub-station, with site access through Portland Port from Castletown.

- 5.2 A detailed description of the development proposals is set out within the Environmental Statement Chapter 2 but for ease of reference a summary is provided below.
- An Energy Recovery Facility (ERF) takes processed non-recyclable refuse, known as Refuse Derived Fuel (RDF) and other residual wastes that are similar in composition, such as commercial and industrial wastes (C&I), and uses it to generate heat and electricity. The plant is capable of processing all the RDF and similar material that is generated in Dorset and from a 3 hr (100 mile) drive time catchment area. The Port location can also accept fuel delivered by ship.
- 5.4 Currently Dorset is a net exporter of RDF as there are no disposal methods within the county. The proposed development seeks to address this imbalance and ensure that the residual waste from within Dorset and other neighbouring areas is captured and is used to provide heat and electricity for the residents that generated it.
- 5.5 The efficient operation of the plant relies on the fuel delivering sufficient energy to power the plant, however the embodied energy (CV) in the fuel is likely to vary. It is expected that the anticipated source of RDF will require 183,000 tonnes of RDF per annum (tpa) to power the plant, however fuel with a lower CV would require 202,000tpa RDF annually. The plant will operate for c.8000 hours of the year, typically with a month shut down for maintenance each year, and will run 24 hours a day when operational. As the



- plant is located within Portland Port the fuel can be brought to the development site either by road or by ship.
- 5.6 The plant will operate as a Merchant Plant and will compete for fuel from the waste market. Therefore, it is expected that deliveries will arrive to the site via both road or sea depending on the origin of the RDF.
- 5.7 The production of RDF is contracted out by the local authority and the adopted Dorset Waste Plan sets out that there will be a shortfall in the planned disposal of 234,000 tonnes of non-hazardous residual waste generated by Dorset by the end of the Waste Plan period. There is therefore a need within Dorset for a facility that will process and dispose of this waste in an environmentally responsible manner.
- 5.8 The proposed access strategy is set out below and has been subject to pre-application consultation discussions with the local Highway Authority and Highways England. The site masterplan is contained within Appendix E of this TA.

Site Access

HGV Deliveries

- Vehicles will access the development through the main vehicular entrance to Portland Port, from Castletown, with access being controlled via the existing Port Gatehouse. Once vehicles have entered the Port, they will use the existing road system to access the site. This will be facilitated by via the Castletown and Dock Road one-way system and Main Road.
- 5.10 The site will operate a one-way system for HGVs. Vehicles delivering RDF will enter from Main Road to the north and pass through the weighbridge. They will then travel southwards along Canteen Road and Balaclava Road before parking in the RDF unloading area to the south of the ERF building.
- 5.11 Once they have parked, they will then off-load their cargo into the RDF store and exit onto Incline Road to the south west. HGV's will travel north using Incline Road, passing

0979 – Portland ERF Page **31** of **66**



- through the weighbridge for the second time before using the Port's internal road network to exit onto Castletown.
- 5.12 This route will be followed by all HGVs, including those that are delivering process materials or removing residues such as ash. However, ash and consumable deliveries will pass to the south of the ERF building onto Incline Road and then enter the service yard, to the west of the building. Vehicles will exit onto Incline Road at the yard's northern end.
- 5.13 There will be a number of secondary delivery areas to provide for consumables and other plant materials. In addition to this there will be a weighbridge at the entrance and exit to ensure that the mass of vehicles is recorded as they arrive and leave the site.
- 5.14 Tracking of the internal layout is shown on Drawing 0979-ATR-101-102 contained within Appendix A.

Ship Deliveries

5.15 Deliveries of RDF by ship will be offloaded at the 50t berth on the Inner Breakwater, to the north east of the site (or other berthing locations as directed by the Port), and brought into the site by HGV along Inner Breakwater Road and Old Depot Road, joining the main flow of traffic on Main Road and then entering the site. The vehicles will then follow the same delivery protocol as those bringing RDF in by land, before re-circulating back around to the Inner Breakwater to reload.

Staff Vehicles

5.16 Employee vehicles will access the site via the same route as HGV deliveries, however they will turn into the staff car park located to the east of the office block.

Parking

5.17 There are proposed to be 36 parking spaces provided within the staff and visitor car park. This would include two disabled parking bays. This level of parking is considered adequate given the expected size of the work force and will cater for overlapping shifts.



- 5.18 Dorset Council "Non-Residential Parking Guidance" outlines 'suggested car and cycle parking guidelines' and that 'the figures should be interpreted as an initial, pragmatic, County-wide guide'. The proposed development parking is 15% less than the suggested level within the DC guidance. This level of parking considered to be a pragmatic choice given the anticipated staffing levels for this specific development and the accessible location of the development.
- 5.19 The car park will include 2 accessible parking spaces, 5% of the overall parking number.
- 5.20 Three of the parking spaces will be provided as electric vehicle charging points to promote the uptake of electric vehicles. The remainder of the spaces will have ducting provision to enable them to be upgraded to charging points as required.
- 5.21 In order to facilitate active travel the cycle store provides storage for 8 bicycles in the form of ground mounted Sheffield stands. Whilst less than the 17 required for an equivalent B8 use this is expected to be sufficient for the 15 shift operatives on site providing secure covered cycle parking spaces along with secure locker storage, staff changing rooms and showers.

0979 – Portland ERF Page **33** of **66**



6 Trip Generation & Distribution

Introduction

- 6.1 This section of the Transport Assessment considers the trip generation that might be expected to arise as a result of the proposed development, together with the potential distribution on the local road network.
- 6.2 Since every ERF facility uses specific geographical and operating parameters, calculations for traffic flows are usually undertaken from first principles with all RDF being delivered via road for a highly robust assessment.
- 6.3 In the initial feasibility stages of the project some assumptions had to be made on plant capacity and fuel calorific value (CV) which defined the likely numbers of daily deliveries to the plant. At that early stage public consultation was also undertaken and so an upper limit of 40 HGV deliveries each way per day was considered appropriate.
- 6.4 As design of the plant has progressed the CV assumptions have been refined and so our detailed calculations are based upon 202,000tpa RDF delivered by road.

Deliveries to the Plant

Potential RDF Sources

- 6.5 A number of different RDF providers have expressed interest in supplying fuel to the development based on a drive time of around up to three hours or up to 100 mile distance. As shown on Figure 6.1 in Appendix A, the entirety of Dorset is within a three hour drive time, which extends as far as the majority of Devon in the west, Bristol to the north and Basingstoke to the east.
- 6.6 The aim of the development site is to source all RDF from within Dorset itself, however should that not be commercially possible then there are a large number of alternative sources of RDF to power the plant.
- 6.7 Within Dorset the majority of RDF is produced at a Mechanical Biological Treatment (MBT) plant near Canford,

0979 – Portland ERF Page **34** of **66**



- around 1 hr drive (39 miles) from the development site. The adopted Dorset Waste Plan sets out that there could be a shortfall in processing capacity of around 234,000 tonnes by 2033 and therefore states in Policy 6 of the plan that additional recovery facilities would be supported.
- 6.8 There are also a number of sites within surrounding Counties that could provide fuel to the plant and a number of commercial operators interested in supplying the plant from locations within a three hour drive time or 100 mile radius.
- 6.9 The development site is also within Portland Port. The Port has one of the largest harbours in the world and is in a very convenient location in order to access shipping traffic passing through the English Channel one of the busiest shipping lanes in the world.
- 6.10 A report undertaken by the Consultancy Tolvik shows that there is a steady stream of RDF that is currently exported via ship and passes through the English Channel. Figure 6.2 below shows the volumes of RDF that currently pass through the Channel:

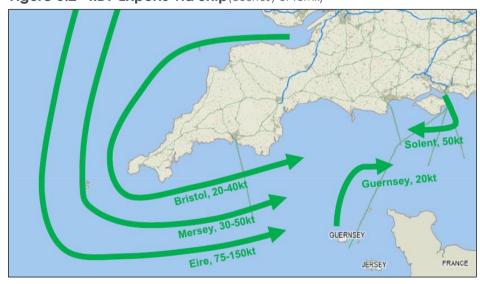


Figure 6.2 -RDF Exports via Ship (courtesy of Tolvik)

- 6.11 The plant is anticipated to process 202,000 tonnes of RDF a year and as shown in Figure 6.2 there is enough RDF exported through the English Channel each year to provide fuel for the plant.
- 6.12 The assessment of traffic generation and distribution has assumed that all RDF will be delivered via lorry, however

0979 – Portland ERF Page **35** of **66**



once operational a percentage of the fuel for the plant is likely be delivered via ship, causing no additional trips onto the local road network.

Development Delivery Trips

- 6.13 The level of trip generation is governed by the amount of RDF that the plant can process on a daily basis and therefore, for a highly robust assessment, the deliveries to the plant have been modelled with the plant running at full capacity and all deliveries arriving at the plant via road.
- 6.14 With a capacity of 202,000tpa and operating 8000 hours per year, 24 hours a day, the plant will require 606 tonne per day of RDF. This would normally arrive loose using a covered walking floor HGV Wagon, the standard vehicle for the transport of RDF, carrying 24 tonnes per vehicle. In order to service the plant 25 deliveries of RDF would need to occur per day resulting in 50 vehicle movements.
- 6.15 The energy recovery process would also produce two different types of ash, bottom ash and fly ash. Both types of ash would be collected in a hopper that would allow it to be stored before being carted away from the Plant, this would either be done:
 - By HGV using a different vehicle to those that deliver the RDF to the plant; or
 - By ship as the plant is located within Portland Port, this option would generate no additional HGV trips onto the local road network.
- 6.16 The ash could either be carted away in its raw form or stored at a location elsewhere on the Port retained estate and converted to Incinerator Bottom Ash (IBA) Aggregate. This could then be removed from the Port by either HGV or Ship.
- 6.17 However, for a highly robust assessment, it has been assumed that the ash would be carted off site solely using HGV. It is estimated that the plant will produce around 121 tonnes of ash a day during the operating period and typically HGV's with 12 tonne loading capacity would be used. This would generate a further 10 additional trips a day.

0979 – Portland ERF Page **36** of **66**



- 6.18 In addition to the RDF and ash, the plant would require materials for its active running, including Activated Carbon, Urea and Bicarbonate of Soda. Powerfuel Portland estimates that the plant would require around 5 tonnes of chemicals a day, this would equate to 1 additional delivery day.
- 6.19 Therefore, once all the consumables, ash cart off and RDF deliveries are accounted for the total trip generation for the development is shown in Table 6.1 below:

Table 6.1 – Total Daily HGV Trips

	Estimated Trips per day	Expected Trips per hour
RDF	50	2
Ash Cart off	20	1
Consumables	2	1
Total	72	4

- 6.20 As shown in Table 6.1 above the plant is expected to generate, on average, up to 2 trips each way per hour onto the local road network or one each way every 30 minutes. This minimal level of trip generation is not expected to cause a severe impact on the local road network.
- 6.21 For the purposes of the traffic impact assessment and other related traffic impacts a figure of 80 trips per day or 40 each way have been used. This figure should ensure that all scenarios are covered such as variation in delivery hours or in supplies of consumables.

Staff Journeys

- 6.22 In addition to the deliveries and cart-off trips that would be generated by the plant, staff would travel to work at the site.

 Staff are expected to be drawn from the local area, specifically on the Island itself, where possible.
- 6.23 Once fully operational the plant is expected to employ around 35 people full time on a three shift pattern with eight hour shifts. Working hours and shift patterns will be set to meet the needs of the plant and will be regularly reviewed.

0979 – Portland ERF Page **37** of **66**



The site is anticipated to be subject to a Travel Plan and one objective of that is expected to seek to ensure that staff would be arriving and leaving outside of the normal network peak hours.

- 6.24 The 2011 census has been used to source Method of Travel to Work Data for current employees travelling to work in the Port. This demonstrates that 64% of people currently travel to work in a single occupancy vehicle, with around 30% commuting via active and sustainable means.
- 6.25 The census also indicated that over half, 54%, of the workforce on the Isle of Portland lives on the Island itself, and that when Weymouth is taken into account 86% of the workforce on Portland is drawn from within either Weymouth or Portland.
- 6.26 Table 6.2 below shows the method of travel to work for people who work in and around the Port:

Table 6.2 – Method of Travel to Work to Weymouth and Portland 008 from Weymouth & Portland 006, 007, 008 & 009.

Method of Travel to Work	2011 No. Commuters	Percentage Mode Share
Work mainly at or from home	0	0%
Train	1	0%
Bus, minibus or coach	68	6%
Taxi	1	0%
Motorcycle, scooter or moped	33	3%
Driving a car or van	676	55%
Passenger in a car or van	82	7%
Bicycle	86	7%
On foot	263	22%
Other method of travel to work	10 1%	

0979 – Portland ERF Page **38** of **66**



Method of Travel to Work	2011 No. Commuters	Percentage Mode Share	
Total	1,220	100%	

- 6.27 As shown in Table 6.2, 43% of people who travel to Portland Port and the surrounding area do so via active and sustainable means.
- 6.28 Table 6.3 sets out the estimated daily trips per mode for 35 full time staff at the ERF:

Table 6.3 – Staff Development Trips:

Method of Travel to Work	Total Daily Number of Trips
Work mainly at or from home	0
Train	0
Bus, minibus or coach	2
Taxi	0
Motorcycle, scooter or moped	1
Driving a car or van	19
Passenger in a car or van	2
Bicycle	2
On foot	8
Other method of travel to work	0
Total	35

As shown in Table 6.3 it is expected that, based upon historic mode share data, the development would generate around 38 additional journey to work vehicle trips onto the local road network throughout the day. As the site is anticipated to work on a three shift pattern the maximum hourly trip generation would be approx. 13 trips with 6 or 7 arrivals and departures at shift change times.

0979 – Portland ERF Page **39** of **66**



6.30 The anticipated shift pattern for the development means that staff trips would occur outside of the peak network hours. It is expected that the development travel plan would further reduce the level of trip generation by staff and ensure that there would be an even smaller impact on the local network.

TEMPro Growth Factor

- 6.31 In order assess impacts in the future year scenario, a TEMPro growth factor for MSOA 'Weymouth and Portland 008 & 009' to include the cumulative developments, has been applied to the traffic data collected during the 2017 & 2019 traffic surveys.
- 6.32 Table 6.4, 6.5 & 6.6 below sets out the TEMPro growth factors used:

Table 6.4: TEMPro Growth Factor – 'Weymouth and Portland 008 & 009' 2017 to 2019

Time Period	Scale Factor	
AM Peak	1.03068	
PM Peak	1.02902	

Table 6.5: TEMPro Growth Factor – 'Weymouth and Portland 008 & 009' 2019 to 2023

Time Period	Scale Factor	
AM Peak	1.06272	
PM Peak	1.06076	

Table 6.6: TEMPro Growth Factor – 'Weymouth and Portland 008 & 009' 2019 to 2033

Time Period	Scale Factor	
AM Peak	1.15083	
PM Peak	1.14618	

6.33 The traffic flows for all links in the baseline 2023 & 2033 scenario are shown on Figures 7.1 / 7.2 and 7.7 / 7.8 contained within Appendix A of this report.

0979 – Portland ERF Page **40** of **66**



6.34 The TEMPro rate that is shown above allows for additional committed development (residential and employment) as well as an increase in background traffic. Table 6.7 below sets out the planning assumptions from the TEMPro growth factors used:

Table 6.7 – TEMPro Planning Assumptions

Weymouth and Portland 008	Base House- holds	Future House- holds	Increase in House- holds	Base Jobs	Future Jobs	Increase in Jobs
2019-2033	5449	5801	352	5021	5223	202

6.35 As shown in Table 6.7 a large amount of committed development within Weymouth and Portland has remained within the TEMPro growth rate and this rate therefore represents a robust assessment of the traffic growth in the local area.

Committed Development

- 6.36 During the EIA Scoping a number of committed development sites were identified for inclusion within the traffic impact assessment in the Transport Assessment, these are:
- Ocean Views, Hardy Complex, Castle Road, Portland (phase 2): redevelopment of former naval accommodation block into 157 apartments, together with the development of 191 new build homes, with associated car parking (application reference: 02/00703/FUL, as amended)
- Royal Manor Arts College, Weston Road, Portland: demolition of existing buildings and erection of 98 dwellings (application reference: WP/19/00919/OUT)
- Verne Common Road and Ventnor Road, Portland: development of vacant land by the demolition of garage and erection of 25 dwellings (application reference: WP/18/00662/FUL)
- Southwell Primary School, Sweethill Lane, Portland: demolition of existing buildings and construction of up to 58 dwellings (application reference: WP/17/00866/OUT)

0979 – Portland ERF Page **41** of **66**



- Ferrybridge Inn, Portland Road, Weymouth: demolition of existing public house and construction of up to 22 residential units (application reference: WP/14/00929/OUT)
- Disused Quarry Works Stockyard, Bottom Coombe, Park Road, Portland: development of approximately 62 dwellings (application reference: WP/14/00591/OUT)
- Redundant Buildings at Bumpers Lane, Portland: demolition of existing redundant industrial buildings and erection of approximately 64 dwellings (application reference: WP/14/00330/OUT)
- Plot X, Mulberry Avenue, Portland: erection of two blocks of two storey business units comprising three B1 units and six B8 units (total floorspace 766 sqm) with associated parking and landscaping (application reference: WP/18/00940/FUL)
- Plot M1B, Hamm Beach Road, Portland: erection of three industrial and commercial buildings (B1, B2 and B8, total floorspace 2,879 sqm) and associated external works (application reference: WP/17/00631/FUL, as amended).
- Remaining development (and associated planning permissions) permitted under the 1997 Portland Harbour Revision Order.
- Development (and associated planning permissions) permitted under the 2010 Portland Harbour Revision Order.

Portland Port Committed Development

- 6.37 The 1997 Harbour Revision Order allowed for a capped number of trips to be generated by the Port onto the local road network. Therefore, in order to provide a robust assessment the capped trips from this revision order have been used in the assessment of the local road network.
- 6.38 Project Osprey (now under construction) was submitted by Portland Port in 2017 and within this application analysis was undertaken to ascertain the headroom available for development compared to that set out in the HRO. In 2017 there were 375 am peak trips remaining and 316 pm peak trips remaining within the agreed 1997 HRO.
- 6.39 The HRO only provided a cap on peak hour trips, therefore in order to provide an assessment of the potential daily trips generated by the Port a factor has been derived from the existing Port traffic to allow the peak hours trips to be converted to daily flows.

0979 – Portland ERF Page **42** of **66**



6.40 Table 6.8 & 6.9 below sets the trip generation allowed under the 2010 Revised Harbour Revision Order. The 2010 Revised HRO did not give a figure for arrivals and departures, and so the currently observed proportions for arrivals and departures have been applied to the 2 way data used to define the HRO:

Table 6.8 – AM Revised 2010 HRO Trips

	ARR	DEP	Total
Existing Percentage	89%	11%	100%
2010 Revised HRO AM Peak	417	52	469

Table 6.9 – PM Revised 2010 HRO Trips

	ARR	DEP	Total
Existing Percentage	20%	80%	100%
2010 Revised HRO PM Peak	81	326	407

Ocean Views - Comer Homes Development

- An interrogation of the Dorset Planning Portal showed that the Transport Assessment undertaken in support of this development was not available. Therefore in order to understand the trip generation from this development a search of the industry standard TRICS database has been used, this TRICS report is contained within Appendix F of this Transport Assessment.
- 6.42 The scheme comprises multiple phases and so whilst the planning description set out above suggest 348 dwellings the full site of 554 dwellings has been included in the cumulative appraisal. Table 6.10 below sets out the trip generation estimated for the consented Ocean Views using recent TRICS Data:

Table 6.10 – Ocean Views Trip Generation

ARR DEP Total	
---------------	--

0979 – Portland ERF Page **43** of **66**



AM Peak	35	84	119
PM Peak	66	44	110

Royal Manor Arts College, Weston Road, Portland

- 6.43 The accepted Transport Assessment undertaken in support this application was used to calculate the trip generation from the development site.
- 6.44 No distribution was undertaken within the Transport Assessment therefore the distribution used for the Ocean View Development has been used.
- 6.45 Table 6.11 sets out the level of trip generation from the accepted Royal Manor Arts College:

Table 6.11 – Royal Manor Arts College Trip Generation

	ARR	DEP	Total
AM Peak	15	37	52
PM Peak	33	16	49

Other Committed developments

- 6.46 The other committed residential developments set out in paragraph 6.36 above would deliver a total of 231 new dwellings if implemented in full.
- 6.47 The Ocean Views scheme has not been fully implemented and the housing growth anticipated in the TEMPro growth rates set out in table 6.7 above takes account of the additional 231 dwellings.
- 6.48 In addition two employment schemes were identified for inclusion as committed development and the scale of those permitted schemes are within the TEMPro employment growth projections.
- 6.49 The addition of predicted traffic for Ocean View and Royal Manor Arts college and the inclusion of growth rates which include development growth therefore takes account of all other committed development.

0979 – Portland ERF Page **44** of **66**



Trip Generation Summary

- 6.50 Table 6.12 below sets out the total trip generation for the development, as well as the total trip generation from the committed development.
- 6.51 An opening year of 2023 has been chosen as this is the anticipated opening year of the facility.

Table 6.12 – Total Development Trip Generation

	Arrivals	Departures	Total		
AM Peak Hour Trips					
Staff	Negligible – Shift	change expected peak hours	to be outside of		
Deliveries	2	2	4		
Total Development	2	2	4		
Committed Development	467	173	640		
	PM Peak Ho	ur Trips			
Staff	Negligible – Shift change expected to be outside of peak hours				
Deliveries	2	2	4		
Total Development	2	2	4		
Committed Development	130	386	516		
	Daily Tri	ps			
Staff cars	19	19	38		
Deliveries	36	36	72		
Total Development	59	59	118		
Committed Development	3186	3187	6373		

- 6.52 As shown in Table 6.12 above the level of trip generation from the proposed development is minimal and far lower than that already consented on Portland.
- 6.53 The impacts of employees journey to work by car is intended to be mitigated by a Travel Plan emphasising active travel. Those journeys will also be made outside of the normal network peak by light vehicles and would also be included within the projected future traffic growth rates and

0979 – Portland ERF Page **45** of **66**



- cumulative impacts used. The impacts of staff journeys to work is therefore considered negligible and would not result in a severe impact on the local road network.
- 6.54 The appraisal of traffic impacts from the HGV movements has been based upon 80 movements per day, 40 in each direction, reflecting initial assumptions rather than the slightly reduced value of 72 movements per day now expected following further detailed scheme assessment.

Development Distribution

Deliveries

6.55 It is anticipated that all deliveries that arrive to the site via road would travel via the route from the A35(T) as set out in para 3.13 above. The percentage distribution of development traffic onto the surrounding local road network is shown in Figure 6.5 in Appendix A and Table 6.13 below:

Table 6.13 – Percentage of Deliveries onto Local Road Network

Links — Distribution					
Portland Beach Road	Weymouth Way via Chickerell Road	Weymouth Way via Buxton Road	Weymouth Relief Road	A35(T) Eastbound	A35(T) Westbound
100%	50%	50%	100%	90%	10%

- 6.56 As shown in Table 6.13 above, 100% of the deliveries will travel along the Weymouth Relief Road and Portland Beach Road as they are not included within the one-way system. 50% of the deliveries would travel along the remaining links within Weymouth as the one-way system is in operation through the town for HGV's. It is assumed that the vast majority of trips would travel from the east as this is where the majority of the RDF is expected to be generated.
- 6.57 Traffic flows at Stadium Way are fairly balanced with daily traffic flows on the A35 in 2017 of 22,803 to the west and 24,808 to the east. With very low development traffic flows in comparison to the A35 daily flows any variation in

0979 – Portland ERF Page **46** of **66**



- distribution at the roundabout would only be expected to have a negligible effect.
- 6.58 Table 6.14 & 6.15 below shows the number of delivery vehicles that will travel over the local road network per day and hour respectively:

Table 6.14 – Number of Daily Deliveries onto Local Road Network

Links – Daily Trips					
Portland Beach Road	Weymouth Way via Chickerell Road	Weymouth Way via Buxton Road	Weymouth Relief Road	A35(T) Eastbound	A35(T) Westbound
80	40	40	80	72	8

Table 6.15 – Maximum Number of Hourly Deliveries onto Local Road Network

Links – Hourly Trips					
Portland Beach Road	Weymouth Way via Chickerell Road	Weymouth Way via Buxton Road	Weymouth Relief Road	A35(T) Eastbound	A35(T) Westbound
4	2	2	4	3	1

6.59 The table above shows that there will be a very low number of trips on the routes that the HGV's will use to access the development site.

Staff Trips

- 6.60 The proposed employment distribution has been calculated using data from the 2011 Census ('WU03EW Location of usual residence and place of work by method of travel to work'). The Middle Super Output Area (MSOA) 'Weymouth and Portland 008' (where the site is located) has been used to ascertain the distribution of trips on the local road network with the data set for inbound employment trips. Census data is contained within Appendix G of this TA.
- 6.61 This census distribution showed that a large percentage (74%) of individuals who travel to work from the immediate local area live and work on the Island itself. Therefore there

0979 – Portland ERF Page **47** of **66**



- is good scope to encourage and facilitate active travel to and from the site.
- 6.62 All staff who work at the site, live in southern Weymouth, and choose to travel by car will access the site using Portland Beach Road. The census data indicates this is likely to be around 26% of site staff, and so it is expected that around 12 of the 35 site employees would use Portland Beach Road each way on their journey to work each day.
- 6.63 The distribution of staff trips onto the wider road network is shown in more detail on Figure 6.6 contained within Appendix A.

<u>Committed and Cumulative Development</u>

6.64 In order to provide a distribution of traffic travelling on and off the Island for other committed developments, the 2011 census has been used to identify where the majority of the population of Portland travel to work within the local area. The analysis showed that around three quarters of the working population who work in the same MSOA as the port do not travel to the mainland to work. The distribution for non-port committed development is shown in Figure 6.4 contained within Appendix A.

Conclusion

- 6.65 The plant will be powered by RDF imported to the site either via ship or by HGV. Dorset is currently a net exporter of RDF and therefore the plant has been designed with enough capacity to accommodate RDF generated within Dorset. If this were the case deliveries then would come to the site via road, however if the plant is not awarded contracts by Dorset Waste Partnership then deliveries could come via road from within the wider catchment area and by sea from further afield. However, in order to provide a robust assessment of the trip generation for the ERF it has been assumed that all fuel would be carried via HGV.
- 6.66 Trip generation for the development has been undertaken from first principles and is based on the hourly processing capacity of the plant. When operating at full capacity the plant can process 183,000 tonnes of RDF per annum



- however fuel with a lower CV would require up to 202,000tpa RDF annually.
- 6.67 This would equate to around 36 deliveries per day, or 72 two way trips although the assessment has been based upon 80 daily delivery movements. The plant would generate four additional trips onto the local road network during the peak hours.
- 6.68 In addition to the RDF deliveries the plant would require waste ash to be carted away, which could either be done via ship or by HGV. Again, in order to provide the most robust assessment it has been assumed that all ash would be carted away via HGV.
- 6.69 In total the plant would not generate more than 80 two-way delivery trips a day onto the local road network, including RDF deliveries, ash cart off and consumables when all the fuel is delivered via road.
- 6.70 It is expected that 90% of the road based deliveries would come via the A35(T) from the east. They would then pass through Stadium Roundabout and south along the Weymouth Relief Road before using the HGV one way system through Weymouth to Portland.

0979 – Portland ERF Page **49** of **66**



7 Traffic Impact Assessment

- 7.1 This chapter of the TA assesses the traffic impact at key links and junctions on the local road network. The scope of assessment has been agreed with Dorset Council Highway Officers during pre-application scoping.
- 7.2 It was agreed during pre-application scoping that detailed junction modelling would not be required due to the minimal impact of the development on the local road network.

Committed Traffic

7.3 As summarised in Section 2 & 6 of this report, there are a number of committed development schemes that have been included in the Impact Assessment for the Proposed ERF.

Links

- 7.4 As was set out in Section 6 of the TA, the development will generate a maximum of 80 delivery trips onto the local road network. A number of links have been assessed in order to ascertain the increase in traffic flow during the peak hours.
- 7.5 The links that have been assessed are:
 - Link 1: Castletown (at Port Access);
 - Link 2: Portland Beach Road;
 - Link 3: Portland Road (south of Foords Corner Roundabout)
 - Link 4: A354 Buxton Road (north of Foords Corner Roundabout);
 - Link 5: A354 Buxton Road (Boot Hill);
 - Link 6: A354 Weymouth Way;
 - Link 7: Stadium Roundabout (A354 Arm);
 - Link 8: Granby Way; and
 - Link 9: B3156.



7.6 The locations of the links are shown on Figure 7.0 contained within Appendix A.

Traffic Flows

- 7.7 Due to the onset of Coronavirus COVID-19, traffic surveys were unable to be undertaken. Therefore, in order to establish baseline traffic flows count data was ascertained from Dorset Council via Permanent ATC's on the various links
- 7.8 All links, except Stadium Roundabout, A354 Buxton Road (North of Foords Corner) and Portland Road, have been taken from the same two week period in November 2019 to ensure a valid comparison. Data for Stadium Roundabout has been taken from a 2017 Highways England Survey, with the other two links taken from a 2017 Dorset Council Survey of Foords Corner Roundabout.
- 7.9 A baseline opening year of 2023 has been assessed and a future baseline year of 2033.

Impact Analysis

7.10 In order to assess the impact of the development on the local road network the change in traffic flows along the nine links has been assessed.

Scenarios

- 7.11 The impact of the development traffic on all links has been assessed by considering the percentage change on each link in the following scenarios:
 - Scenario 1: Percentage Change from 2023 Baseline + Committed to 2023 Baseline with Committed + Development -AM & PM Peaks;
 - Scenario 2: Percentage Change from 2033 Baseline + Committed to 2033 Baseline with Committed + Development – AM & PM Peaks;

0979 – Portland ERF Page **51** of **66**



7.12 The traffic flows for all links in all scenarios are shown on Figures 7.1 to 7.12 contained within Appendix A. Table 7.4 below acts as a key for those diagrams:

Table 7.4 – Traffic Flow Diagrams

	Scenario 1		Scenario 2	
	AM	PM	AM	PM
Baseline	7.1	7.2	7.7	7.8
Baseline + Committed	7.3	7.4	7.9	7.10
Baseline + Committed + Development	7.5	7.6	7.11	7.12

Scenario 1

7.13 Table 7.5 below sets out the percentage change in the AM Peak for the 2023 Baseline with Committed + Development when compared to the 2023 for all links:

Table 7.5 – Percentage Change - Scenario 1 AM

2023 BASELINE + COMMITTED + DEVELOPMENT				
F	AM		Outbound	
121-4	All Veh	0.72%	1.95%	
Link1	HGV	0.78%	2.13%	
Link 2	All Veh	0.25%	0.27%	
LINK 2	HGV	0.64%	1.15%	
Link3	All Veh	0.27%	0.26%	
LINKS	HGV	0.73%	1.77%	
limia.	All Veh	0.27%	0.17%	
Link4	HGV	0.99%	0.38%	
Link5	All Veh	0.16%	0.10%	
LINKS	HGV	0.54%	0.64%	
Link6	All Veh	0.16%	0.17%	
LITIKO	HGV	0.54%	0.95%	
Link7	All Veh	0.16%	0.21%	
LINK/	HGV	0.65%	1.41%	
Link8	All Veh	0.14%	0.14%	
LINKO	HGV	1.48%	0.65%	
Link9	All Veh	0.14%	0.21%	
LIIIK 7	HGV	0.69%	1.47%	

0979 – Portland ERF Page **52** of **66**



- 7.14 As shown in table 7.5 Link 1 (Castletown) has the largest percentage increase of 1.95% for all vehicles when compared to the 2023 Baseline with Committed traffic flows.
- 7.15 The majority of the links have a change of under 1%, with all links below 2.5%, well within expected day to variation on the local road network.
- 7.16 Table 7.6 below sets out the percentage change in the PM Peak for the baseline with committed plus development in 2023 when compared the to the baseline with committed traffic flows.

Table 7.6 – Percentage Change - Scenario 1 PM

2023 BASELINE + COMMITTED + DEVELOPMENT				
Р	PM		Outbound	
	All Veh	2.07%	0.83%	
Link 1	HGV	2.29%	0.92%	
Link 2	All Veh	0.26%	0.28%	
LINK Z	HGV	1.53%	0.81%	
Link 3	All Veh	0.22%	0.20%	
LINK 3	HGV	2.24%	0.93%	
Link 4	All Veh	0.17%	0.19%	
LINK 4	HGV	0.47%	1.13%	
Link 5	All Veh	0.13%	0.15%	
LINK 5	HGV	1.16%	0.71%	
Link 6	All Veh	0.13%	0.18%	
LINK 0	HGV	1.16%	0.76%	
Link 7	All Veh	0.18%	0.19%	
LINK 7	HGV	1.38%	0.77%	
Link8	All Veh	0.08%	0.17%	
LINKO	HGV	0.89%	2.19%	
limbo	All Veh	0.13%	0.12%	
Link9	HGV	2.14%	0.91%	

- 7.17 Table 7.6 shows that when compared to the baseline with committed scenario there is only a maximum increase of 2.1% for all vehicles and 2.3% in HGV flows on two of the assessed links on the local road network.
- 7.18 Again, the minimal increase that is expected when compared to the baseline with committed traffic flows

0979 – Portland ERF Page **53** of **66**



- would be well within the expected day to day variation on the local road network.
- 7.19 Since both AM and PM Peak hour flows in 2023 are well within the day to day variation that would be expected it is considered that the local highway network would satisfactorily accommodate the additional four vehicles that would be generated by the development during both peak hours.

Scenario 2

7.20 Table 7.7 below sets out the percentage change in the AM Peak for the 2033 Baseline with Committed + Development when compared to the 2033 for all links:

Table 7.7 – Percentage Change - Scenario 2 AM

2033 BASELINE + COMMITTED + DEVELOPMENT				
,	AM		Outbound	
Link1	All Veh	1.94%	0.71%	
LINKI	HGV	2.12%	0.78%	
link 0	All Veh	0.25%	0.24%	
Link 2	HGV	1.11%	0.63%	
Limbo	All Veh	0.24%	0.26%	
Link3	HGV	1.75%	0.73%	
13-1-4	All Veh	0.16%	0.26%	
Link4	HGV	0.38%	0.98%	
15-1-5	All Veh	0.10%	0.15%	
Link5	HGV	0.61%	0.53%	
limb/	All Veh	0.16%	0.15%	
Link6	HGV	0.91%	0.53%	
limb7	All Veh	0.20%	0.15%	
Link7	HGV	1.39%	0.64%	
limbo	All Veh	0.13%	0.13%	
Link8	HGV	0.64%	1.44%	
Limko	All Veh	0.19%	0.13%	
Link9	HGV	1.41%	0.68%	

7.21 Table 7.7 shows that the highest percentage increase is 2.12% in HGV flows on the Castletown Link, all other links have a change of under 2% in the AM Peak hour.

0979 – Portland ERF Page **54** of **66**



7.22 Table 7.8 below sets out the percentage change in the PM Peak for the baseline with committed plus development in 2033 when compared the to the baseline with committed traffic flows.

Table 7.8 – Percentage Change - Scenario 2 PM

2	2033 BASELINE + COMMITTED + DEVELOPMENT				
F	PM		Outbound		
Link1	All Veh	1.72%	0.90%		
LITIKT	HGV	2.18%	0.94%		
Link 2	All Veh	0.29%	0.22%		
LINK Z	HGV	1.30%	0.67%		
Link3	All Veh	0.33%	0.22%		
LINKS	HGV	1.83%	0.86%		
Link4	All Veh	0.20%	0.22%		
LINK4	HGV	0.45%	1.02%		
limber	All Veh	0.17%	0.09%		
Link5	HGV	0.93%	0.45%		
limbe/	All Veh	0.17%	0.15%		
Link6	HGV	0.93%	0.59%		
1:-1-7	All Veh	0.17%	0.18%		
Link7	HGV	1.35%	0.76%		
limle0	All Veh	0.12%	0.15%		
Link8	HGV	0.77%	1.36%		
limbo	All Veh	0.14%	0.17%		
Link9	HGV	1.55%	0.77%		

- 7.23 Table 7.8 shows that when compared to the baseline with committed scenario there is only a maximum increase of 2.18% in HGV flows on one of the assessed links on the local road network.
- 7.24 Again, the minimal increase that is expected when compared to the baseline with committed traffic flows would be well within the expected day to day variation on the local road network.
- 7.25 Both the 2023 & 2033 scenarios are well within the day to day variation¹ that would be expected on the local highway network it is expected that the network would satisfactorily

0979 – Portland ERF Page **55** of **66**

 $^{^{1}}$ TAG Unit M1.2 states that day to day variation expected for an automatic traffic count is $\pm 5\%$



accommodate the additional four vehicles that would be generated by the development during both peak hours.

Conclusion

- 7.26 The traffic impact assessment completed demonstrates that all links included in the study area would experience negligible change with a maximum of less than a 3% increase in traffic flow. This change would be well within the natural day to day variation experienced the local road network.
- 7.27 It is therefore concluded that the existing highway network would satisfactorily accommodate the additional traffic arising from the proposed ERF plant without resulting in any severe impacts, and therefore the traffic impact of the scheme is considered to be acceptable in light of the requirements of the NPPF.

0979 – Portland ERF Page **56** of **66**



8 Framework Travel Plan

Introduction & Background

- 8.1 The NPPF highlights that a key tool to achieve its stated objectives on sustainable transport will be a Travel Plan, and the Framework requires that all developments which generate significant amounts of traffic should be requested to provide a Travel Plan.
- 8.2 Whilst the development is not expected to generate significant amounts of traffic, a Framework Travel Plan has been prepared in line with best practice seeking to encourage staff at the site to use active travel modes for their journey to work.
- 8.3 This section of the Transport Assessment sets out a proposed framework for a Travel Plan that will ultimately provide a strategy for the introduction of a package of measures aimed at managing multi-modal staff access to the Portland ERF. This focuses on limiting the number of car trips and promoting alternative sustainable travel options.
- 8.4 The Travel Plan that will be prepared will work with the site wide Travel Plan for Portland Port.
- 8.5 The NPPG states that in determining whether a Travel Plan will be needed for a proposed development, local planning authorities should take into account the following considerations:
 - the Travel Plan policies (if any) of the Local Plan;
 - the scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Travel Plan);
 - existing intensity of transport use and the availability of public transport;
 - proximity to nearby environmental designations or sensitive areas:
 - impact on other priorities/ strategies (such as promoting walking and cycling);
 - the cumulative impacts of multiple developments within a particular area;



- whether there are particular types of impacts around which to focus the Travel Plan (e.g. minimising traffic generated at peak times); and
- relevant national policies, including the decision to abolish maximum parking standards for both residential and nonresidential development

The guidance recommends that:

"It is often best to retain the ability to establish certain elements of the Travel Plan or review outcomes after the development has started operating so that it can be based upon the occupational and operational characteristics of the development."

8.6 It is anticipated that a full Travel Plan for the site, based on the content of this NPPG, will be completed upon occupation of the development. The framework that follows in this section of the report draws upon the analysis of travel patterns set out earlier in this Transport Assessment and establishes the principles for how the full Travel Plan will be structured and implemented.

Travel Plan Objectives

- 8.7 The overarching objectives of the Travel Plan for the Portland ERF development will be as follows:
 - Minimise single occupancy car travel to and from the development;
 - Identify which measures are needed to maximise the use of noncar travel;
 - Lead to a change in the travel behaviour of individuals to a sustainable mode of travel and then maintain that change; and
 - Identify ways of reducing the need to travel to and from the development

Location & Accessibility

8.8 The Travel Plan for this development will need to consider the location of the site, together with its accessibility to local residential areas, and the opportunities available for sustainable travel in the local area. Therefore, information

0979 – Portland ERF Page **58** of **66**



- and analysis contained within this Transport Assessment will have a key role in informing the development of the Travel Plan.
- 8.9 As detailed previously in this report, key issues relating to the site's accessibility include the following:
 - Regular and Frequent bus services to Portland and the mainland;
 - Good network of PRoW's and cycle paths in the vicinity of the site to provide active travel access to the wider area; and
 - The main residential areas of Portland within around a half an hour walk.
- 8.10 The measures set out in the following sections of this framework will aim to take advantage of these attributes.

Physical Measures

- 8.11 The Travel Plan will appreciate the physical or "hard" measures built into the on-site and off-site infrastructure to facilitate the use of sustainable modes of travel. For the Portland Port ERF development, this includes the following:
- Provide sufficient covered secure cycle parking for staff;
- Provide shower and changing facilities; and
- Work with Portland Port on a site wide Travel Plan encouraging public transport and car sharing.

Travel Plan Co-ordinator

- 8.12 The developer will be responsible for ensuring a Travel Plan Co-ordinator (TPC) is in place for the development at first occupation. As well as having specific duties to lead on the delivery of the Travel Plan and the implementation of associated services and promotional strategy, he or she will act as a central point of contact between the developer, local authority and employees.
- 8.13 The TPC will also be responsible for undertaking surveys to monitor the effectiveness of the Travel Plan, and developing the measures accordingly to ensure they respond to changes in local sustainable transport infrastructure and



services and therefore continue to meet the needs of employees.

Services & Facilities

- 8.14 One of the TPC's duties will be to lead on the delivery of any additional services in connection with the Travel Plan. These "soft measures" will be complementary to the physical infrastructure or "hard measures" set out above. For the Portland ERF development it is proposed that this would include the following:
 - Set up a staff travel notice board and/or web-site; providing an outlet for the promotional strategy set out below;
 - Distribute travel information packs to each member of staff as part of the induction process, providing detail on all potential sustainable travel opportunities;
 - Monitor cycle usage and if demand is high then investigate the creation of a Bicycle User Group (BUG).

Promotion

- 8.15 The promotional strategy will be implemented by the TPC. This will aim to raise awareness of the aims and objectives of the Travel Plan, promote sustainable travel options and engage residents in the future development of the Travel Plan. As described above, as part of this strategy sustainable transport packs will be distributed to the staff as part of their induction. This could include the following travel information as appropriate:
 - A brief explanation of the Travel Plan and its objectives;
 - Pedestrian, cycling and public transport maps;
 - Bus and rail timetables;
 - Promotional material highlighting health and environmental benefits of walking and cycling;
 - Details of local car share databases (e.g. www.dorset.liftshare.com, www.carsharedorset.com);
 - Public transport information website addresses and contact numbers; and

0979 – Portland ERF Page **60** of **66**



- Contact details for Travel Plan Coordinator.
- 8.16 One of the key duties of the TPC will be to disseminate updated travel information through the staff notice board and web-site to ensure it is relevant to meet the on-going needs of employees.
- 8.17 Any promotional staff based activities and events can be announced and reported on via the staff travel website.
- 8.18 Engaging staff in the Travel Plan process will be an important element of the promotional strategy. Therefore, the role of the TPC will also include the establishment of an interactive community travel forum, during which the TPC can present the aims, objectives and measures of the Travel Plan, and receive feedback and suggestions from participating residents.

Review

- 8.19 The Travel Plan Coordinator will also be responsible for monitoring and evaluating the impacts of all the measures implemented through the Travel Plan and reporting back to the relevant authorities. Monitoring of the Travel Plan will be important in understanding the varying nature of residents' travel habits, changes to local transport infrastructure and services and ensuring that the objectives of the Travel Plan continue to be delivered.
- 8.20 The monitoring process would involve questionnaire surveys undertaken to assess changes to the mode share of trips to the development site. It is proposed that questionnaires are distributed to staff six months after completion of the development in order to establish baseline travel behaviour and at 12 monthly intervals thereafter for a period of three years from the initial review stage in order to monitor the effectiveness of the travel plan measures.
- 8.21 Staff will also be engaged in the monitoring and review process through the travel forum. An annual meeting of the forum will be held (tying in with the timing of the annual review) to evaluate the Travel Plan initiatives in light of feedback from the questionnaires. This meeting should involve presentation of the survey results by the TPC and

0979 – Portland ERF Page 61 of 66



- provide the opportunity for staff to suggest changes to the travel plan measures to ensure it continues to meet their needs and works towards the overarching objectives.
- An annual monitoring report would be produced, setting out the results of the surveys and highlighting any issues arising from the review of the travel plan measures. This could be submitted to Dorset Council and made available to staff and other interested parties. The report would set out appropriate changes to existing initiatives, if required, in order to meet the travel plan objectives.

Implementation Strategy: Delivery and Monitoring

8.23 The responsibilities and timescales for implementation and monitoring the progress of the measures included within the Travel Plan are set out in an Implementation Strategy Table, a copy of which is included in Appendix H. At this stage, the responsibilities and timeframes are indicative. In the majority of cases, the responsibility will rest with the TPC.

0979 – Portland ERF Page **62** of **66**



9 Summary and Conclusions

- 9.1 Awcock Ward Partnership (AWP) has been instructed by Powerfuel Portland Limited to undertake a Transport Assessment to support a detailed planning application for a merchant Energy Recovery Facility on a brownfield site within the existing and operational Portland Port.
- 9.2 The development site has previously been granted planning permission for an energy plant. This facility was proposed to process as fuel a combination of rubber crumb from life expired vehicle tyres and used vegetable oil.
- 9.3 HGV's access Portland via one of two routes as a one-way system is operational through Weymouth. This route is already well used by HGV's servicing the six active stone quarries on the island.
- 9.4 Due to Coronavirus COVID-19-related restrictions on travel, existing traffic data from the Dorset Council traffic surveys was used. This data shows that Portland Beach Road has a daily flow of just under 18,000 vehicles with 11.2% being HGV traffic.
- 9.5 A review of PIA data supplied by Dorset Council indicates that there are no patterns in accident history in Portland given the large number of vehicles that use Portland Beach Road. There is nothing to suggest any material safety issues or deficiency in highway infrastructure within the surrounding area of the Port and wider highway network including in the vicinity of All Saints Church of England Academy and Wyke Regis Infant and Nursery School.
- 9.6 The proposed development is well located away from existing residential areas, although for employees working at the plant the major residential areas of Easton, Weston, Fortuneswell on the island and Wyke Regis on the mainland can all be reached within around 20 minute cycle.
- 9.7 The main residential areas of Portland, Fortuneswell and Easton, are within approx. a half an hour walk via the wide ranging network of PRoW that are present on the island.



- 9.8 In addition to this a number of food retail shops are within around a 10 minute walk (approx. 800m) providing scope for staff and employees to visit these shops via sustainable means during their breaks.
- 9.9 The nearest bus stop is within a 15-20 minute walk. The Island is served by a regular and frequent bus service to and from the mainland, this service runs in the early morning and late at night to enable staff working shifts to still travel sustainably.
- 9.10 It is therefore considered that the site is in an accessible location and that there would be excellent opportunities for journeys to the site to be made by sustainable modes of travel as required by the NPPF.
- 9.11 The development proposals comprise an Energy Recovery Facility (ERF) based within the operational Portland Port. Vehicular access will be taken through the existing main Port access and internal road network.
- 9.12 The level of parking is considered to be appropriate given the accessible location of the development and the proposed staffing levels.
- 9.13 The plant will be powered by Refused Derived Fuel (RDF) imported to the site either via ship or by HGV. Dorset is currently a net exporter of RDF and therefore the plant has been designed with enough capacity to accommodate RDF generated within Dorset.
- 9.14 If this were the case deliveries then would come to the site via road, however if Dorset Waste Partnership do not award the contracts to the plant then deliveries may come from further afield within a 3 hr or 100 mile drive time.
- 9.15 The Port location presents the opportunity for RDF to be transported to the site by sea however, in order to provide a robust assessment of the trip generation for the ERF it has been assumed that all fuel would be carried via HGV.
- 9.16 Trip generation for the development has been undertaken from first principles and is based on the hourly processing capacity of the plant. When operating at full capacity the plant can process up to 202,000tpa RDF annually.

0979 – Portland ERF Page **64** of **66**



- 9.17 The plant is anticipated to generate around 80 delivery movements a day onto the local road network, including RDF deliveries, ash cart off and consumables when all the fuel is delivered via road.
- 9.18 It is expected that 90% of the road based deliveries would come via the A35(T) from the east. They would then pass through Stadium Roundabout and south along the Weymouth Relief Road before using the HGV one way system through Weymouth to Portland.
- 9.19 The balance of traffic flows on the A35 together with the low volumes of development traffic means that any variation in distribution would be accommodated at Stadium Roundabout with negligible effects and without severe impact.
- 9.20 The traffic impact assessment demonstrates that all links included in the study area would experience negligible change with a maximum of less than a 3% increase in traffic flow. This change would normally be within the natural day to day variation experienced the local road network.
- 9.21 It is therefore concluded that the existing highway network would satisfactorily accommodate the additional traffic arising from the proposed ERF plant without resulting in any severe impacts, and therefore the traffic impact of the scheme is considered to be acceptable in light of the requirements of the NPPF.
- 9.22 Chapter 8 of this report contains a Framework Travel Plan setting out a package of measures to promote the use of sustainable modes of transport with the view to achieving a modal shift away from the private car. In turn this would be expected to reduce traffic flows from staff onto the local road network associated with the development, and therefore help to mitigate the impact of the scheme.
- 9.23 It is concluded that the existing and proposed highway network would satisfactorily accommodate the additional traffic arising from the proposed development without resulting in any severe impacts, and therefore the traffic impact of the scheme is considered to be acceptable given the requirements of the NPPF.

0979 – Portland ERF Page **65** of **66**



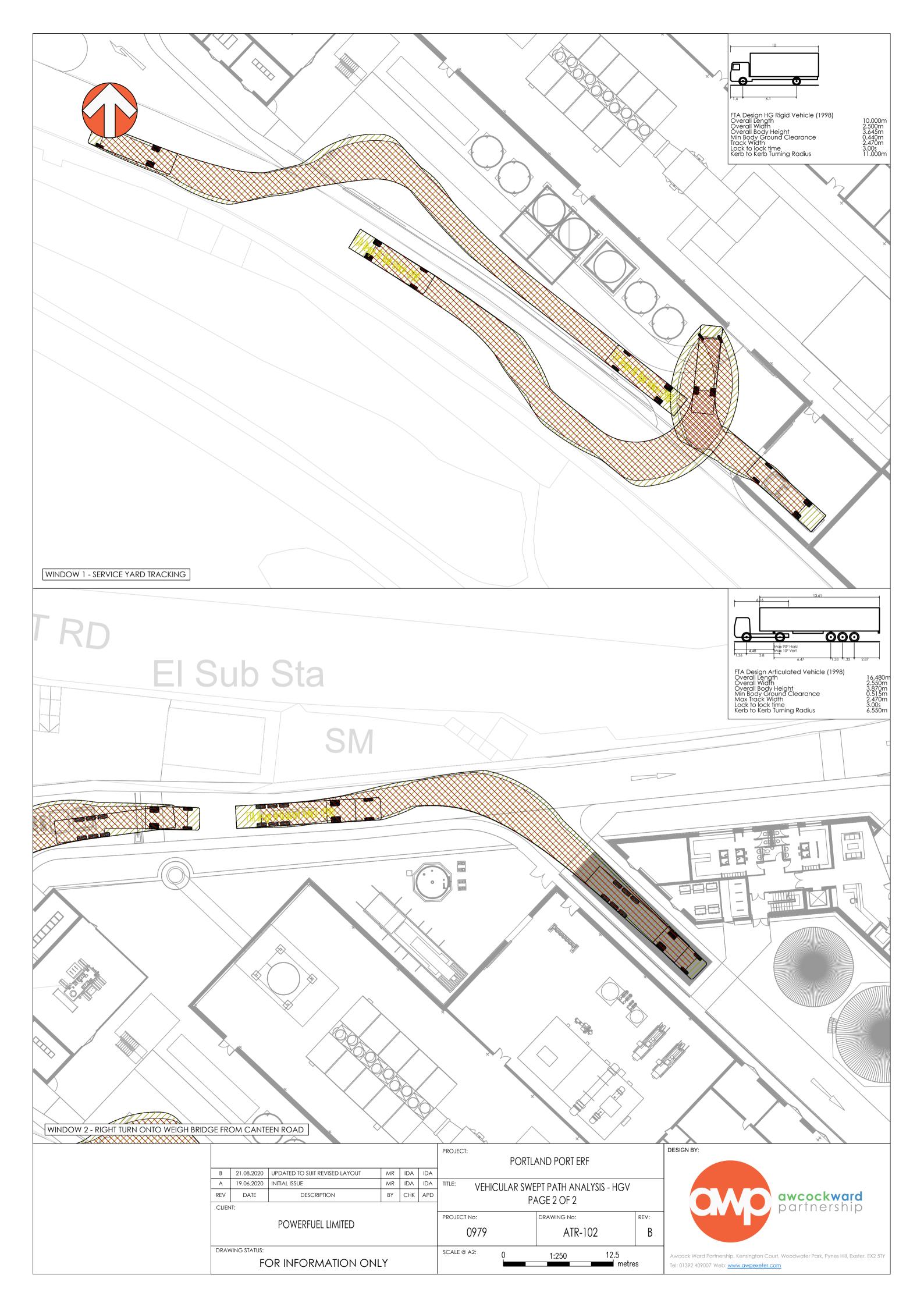
9.24 It is considered that the site provides a sustainable location for development as required by the NPPF & NPPW and that there would be no severe impacts on the local road network. Therefore there is no reason why this site should not be granted planning permission on highway grounds.

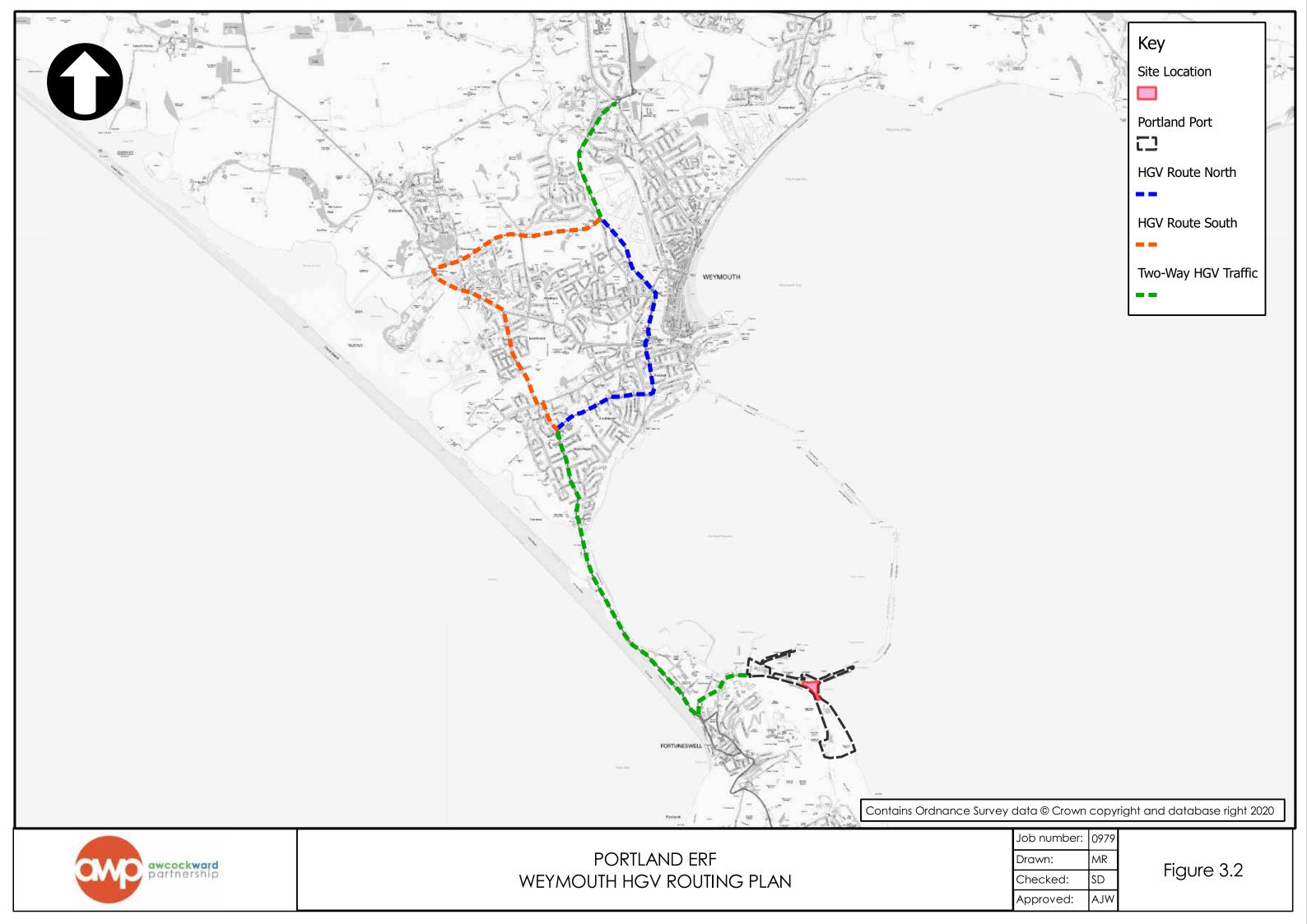
0979 – Portland ERF Page 66 of 66

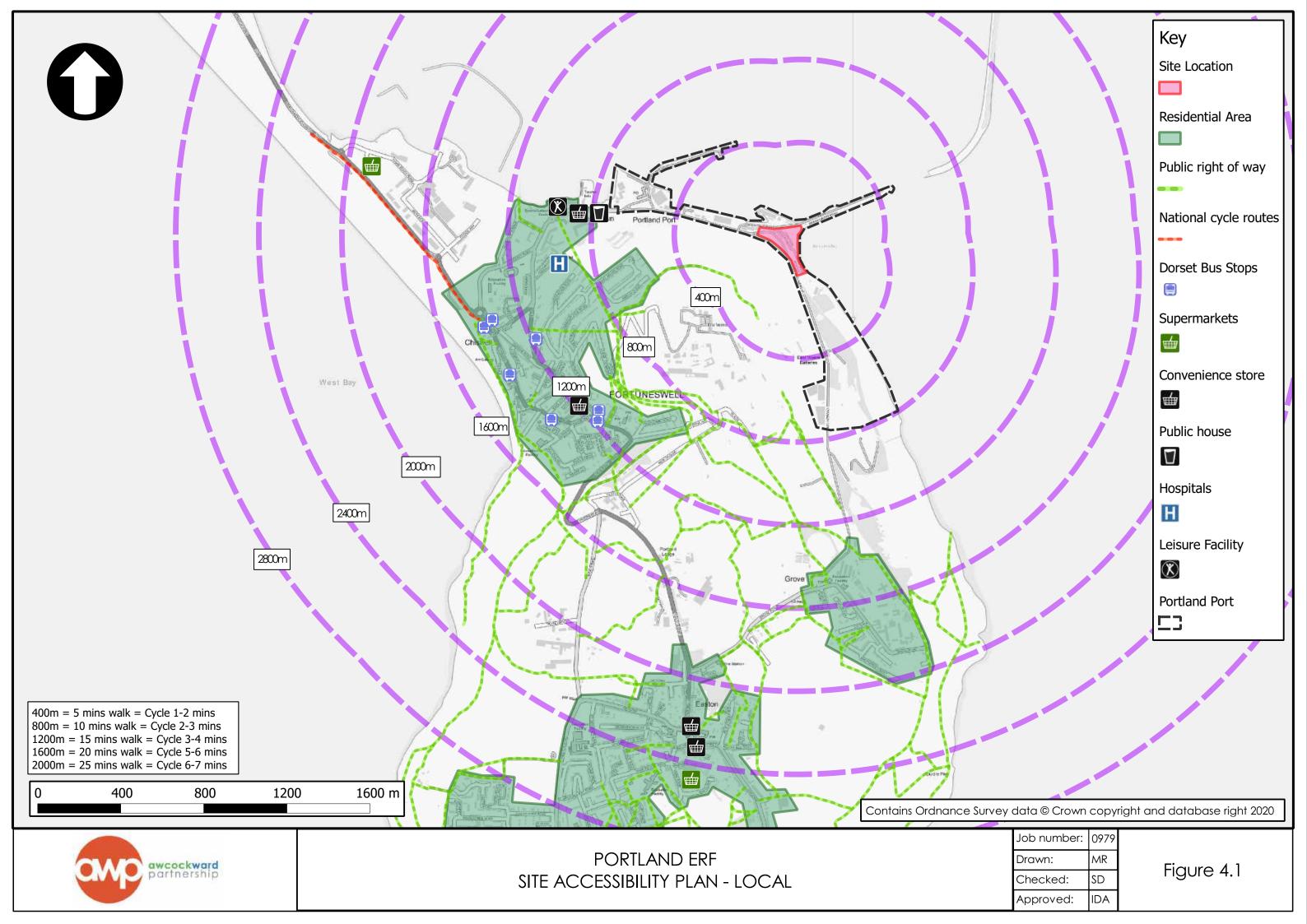


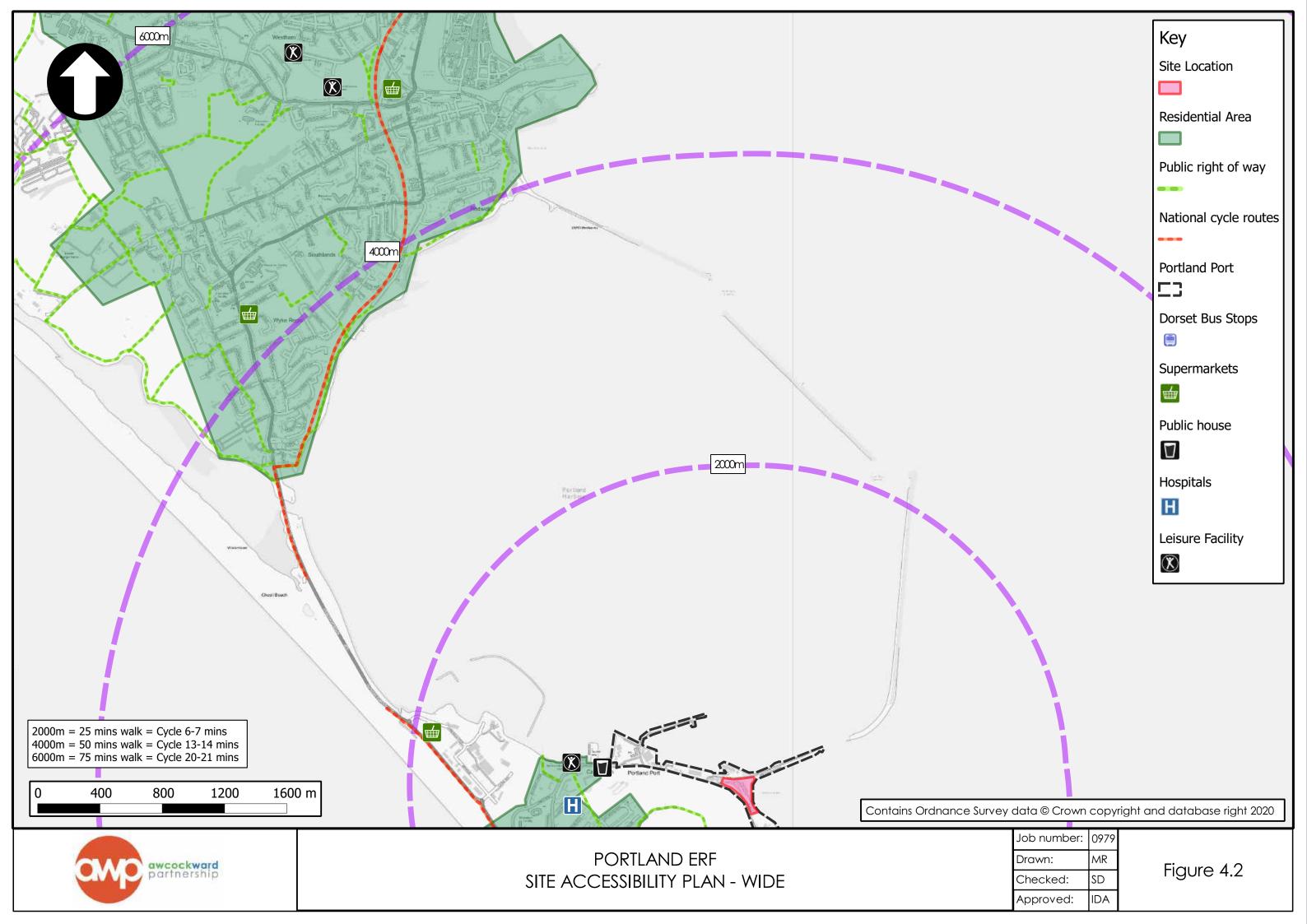
Appendix A Drawings and Figures

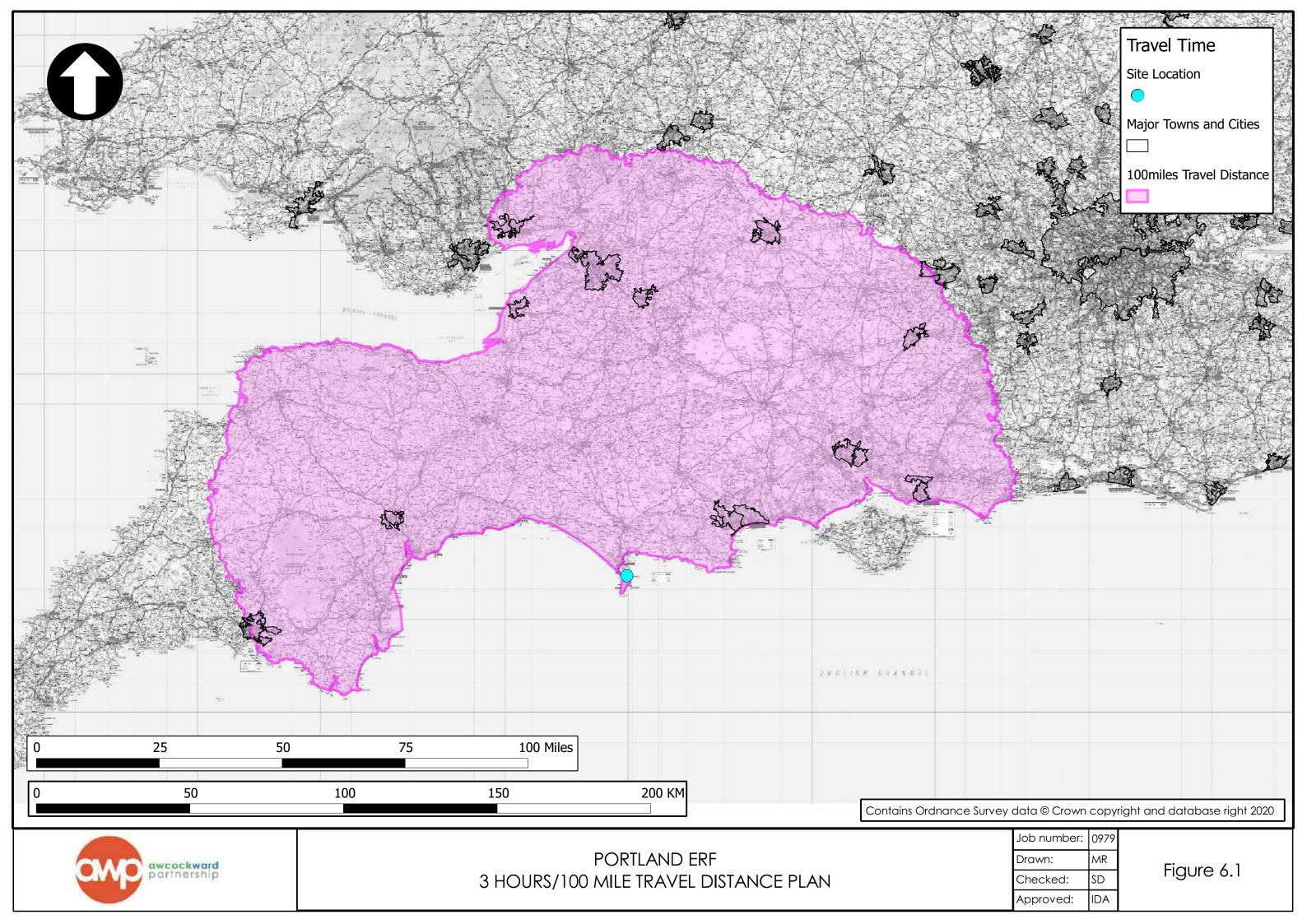


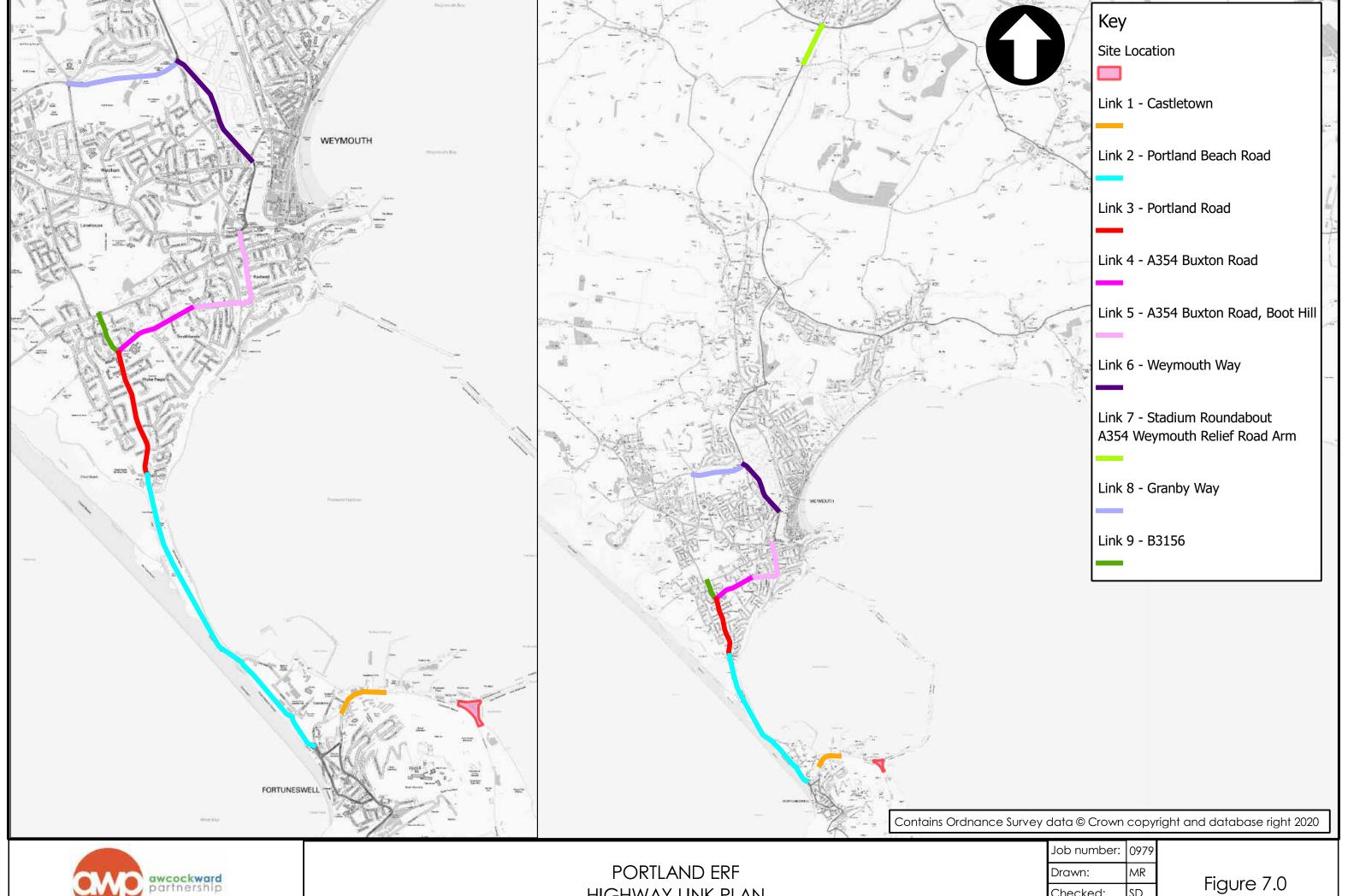












HIGHWAY LINK PLAN

Checked: Approved:

