

# Detailed Emergency Planning Zone Determination Report

## Local Authority DEPZ Determination Report

**EDF Heysham Power Stations (Heysham 1 and 2)**

**Heysham**

**Lancashire**

**LA3 2XH**

Version	2.0 (FINAL)
Issued	05-03-20

Official Sensitive

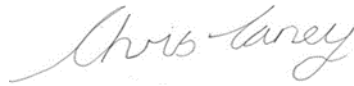


# Contents

Local Authority DEPZ Determination Report .....	1
<b>1. Introduction.....</b>	<b>3</b>
1.1. Purpose of the Report.....	3
1.2. Decision Making Process.....	3
<b>2. Description of the Area .....</b>	<b>4</b>
2.1. Introduction .....	4
2.2. Site Background & Location.....	4
2.3. Geographical Area .....	4
2.4. Description of the Existing DEPZ .....	4
2.4.1. Residential Zone.....	5
2.4.2. Industrial Zone.....	5
2.4.3. Golf Course Zone .....	5
2.4.4. Nature Reserve Zone .....	5
2.4.5. Caravan Park Zone.....	5
2.4.6. Power Station Zone .....	5
2.4.7. Dock Zone .....	6
2.5. Environmental Infrastructure.....	6
2.6. Further Information .....	6
<b>3. Determining the DEPZ.....</b>	<b>7</b>
3.1. Introduction .....	7
3.2. Background to Existing DEPZ.....	7
3.3. Site Operator Minimum Distance Area.....	7
3.4. Walk around DEPZ .....	7
3.5. Multi-agency Consultation.....	8
3.6. Protective Actions / Initial Counter Measures .....	8
3.7. Changes to the DEPZ.....	9
3.8. Pockets of DEPZ within in the OPZ .....	9
3.9. Review of DEPZ .....	9
<b>Annex A: EDF Heysham Power Stations 1.45km Minimum Distance Area .....</b>	<b>11</b>
<b>Annex B: Overview Map of DEPZ.....</b>	<b>12</b>
<b>Annex C1: Justification Map – Northern Area of the DEPZ .....</b>	<b>13</b>
<b>Annex C2: Justification Map – Central Area of the DEPZ.....</b>	<b>14</b>
<b>Annex C3: Justification Map – Southern Area.....</b>	<b>15</b>
<b>Annex D1: Photo Evidence for Northern Area of the DEPZ.....</b>	<b>16</b>
<b>Annex D2: Photo Evidence for Central Area of the DEPZ .....</b>	<b>17</b>
<b>Annex D3: Photo Evidence for Southern Area of the DEPZ .....</b>	<b>18</b>
<b>Annex E: Revised DEPZ Zones .....</b>	<b>19</b>

**This report has been prepared, reviewed and approved by Lancashire County Council as the lead Local Authority in line with Regulation 8 of The Radiation (Emergency Preparedness and Public Information) Regulations 2019.**

Prepared by:



Date: 05/03/2020

Chris Caney  
Senior Emergency Planning Officer  
Lancashire County Council

Reviewed by:



Date: 05/03/2020

Katherine Bentley  
Emergency Planning Manager  
Lancashire County Council

Approved by:



Date: 05/03/2020

Alan Wilton  
Head of Health, Safety & Resilience Service  
Lancashire County Council

# 1. Introduction

Under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPIR 2019) Lancashire County Council (LCC), as the lead Local Authority, must inform the Site Operator and the Regulator (within two months of receiving the Consequence Report as per Regulation 7) of the determined extent of the Detailed Emergency Planning Zone (DEPZ) as per Regulation 8.

Regulation 8 (1) requires the local authority to determine the DEPZ on the basis of the Site Operator's recommendation made in the Consequence Report of the Minimum Distance Area. Following receipt of the Minimum Distance Area within the Consequence Report, the Local Authority may extend the area in consideration of:

- a) Local geographic, demographic and practical implementation issues;
- b) The need to avoid, where practicable, the bisection of local communities; and
- c) The inclusion of vulnerable groups immediately adjacent to the area proposed by the operator.

Under ACOP 8(1), the Local Authority must also ensure that the DEPZ is:

- a) Be of sufficient extent to enable an adequate response to a range of emergencies; and
- b) Reflect the benefits and detriments of protective action by considering an appropriate balance between dose averted; and the impact of implementing protective actions in a radiation emergency across too wide an area.

## 1.1. Purpose of the Report

The purpose of this report, following the decision of LCC in determining the DEPZ, under Regulation 8(3) and ACOP 8(3), is to inform the site operator and regulator in line with the statutory timeline (i.e. within two months of receiving the Consequence Report) of the outcome of the determination of the DEPZ. The report must include:

- a) A description of the area;
- b) A map showing the extent of the area including any pockets of detailed planning within the outline planning zone as per Schedule 6, Part 2, Chapter 2, 3(b)(ii); and
- c) Suitable justification for the determination.

The report has been structured to ensure that all parts of Regulation 8 including ACOP and Guidance are complied with and can be easily identified throughout the report.

## 1.2. Decision Making Process

It was agreed that on behalf of LCC the decision to determine the DEPZ for all sites would be taken by the Head of the Health, Safety & Resilience Service following development work by the Resilience team. This process and agreement was made in consultation with the Cabinet member portfolio holder for emergency planning in April 2019 and was deemed to be an officer rather than a political decision.

## 2. Description of the Area

### 2.1. Introduction

As per ACOP 8(3), this section of the report describes the local area, including geographical features, local population, key infrastructure and forms the basis for the determination of the DEPZ.

### 2.2. Site Background & Location

The Heysham site comprises of two power stations known as Heysham 1 and Heysham 2 which are second generation nuclear power stations with a total of four AGR reactors. Heysham 1 has been operational since 1983 and Heysham 2 has been operational since 1988. The site's activity is electricity generation for export to the national grid. The site's employ approximately 900 people, but allowing for visitors, outside contractors and agency staff, the site occupancy could be as high as 2000. The licensed site is 110.0 acres (44.6 hectares).

Heysham Power Stations site is a UK Nuclear Licenced Site and adheres to the Radiation (Emergency Preparedness and Public Information) Regulations 2019. The competent authority which has the responsibility to regulate the site is the Office for Nuclear Regulation (ONR).

### 2.3. Geographical Area

The site is located on the North West coast of Lancashire approximately 3 miles (5 kilometres) south of Morecambe and 5 miles (8 kilometres) west of Lancaster. The village of Heysham is approximately 1km to the North West of the site. The site is located in the Lancaster City Council area and is within the Parish of Heysham.

Close to the site there are a number of key features such as the Port of Heysham, a golf course and a nature reserve adjacent to the site which are described within section 2.4 of this report. Within 1km of the site boundary fence, there is an Upper Tier COMAH establishment, Tradebe Solvent Recycling Ltd, which has an external (Off-Site) emergency plan in place as required in the COMAH regulations. In terms of critical infrastructure, within 1km of the site boundary fence there is:

- National Grid / Electricity North West Ltd site east of the site
- United Utilities sewage works south of the site

The site is approximately 1km from the A683 Heysham to M6 Link Road, known as the Bay Gateway, which connects Heysham and Morecambe to Junction 34 of the M6 motorway.

As described in the current EDF Heysham Power Stations Off-Site Emergency Plan (version 5.1, April 2019), the prevailing wind direction on the site is from the South West.

### 2.4. Description of the Existing DEPZ

Within the current determined EDF Heysham Power Stations DEPZ there are approximately 256 properties of various descriptions including residential, businesses and schools. The DEPZ comprises of a resident and transient population ranging between 4000 and 8500 dependant on the time of the year. The DEPZ is made up of the seven zones which are described below.

#### **2.4.1. Residential Zone**

There are approximately 230 private residences within the Residential Zone including a number of flats. There are also two vulnerable premises; Butterflies Pre School and Fairways Residential House. The Residential Zone also contains a number of private organisations. All households and businesses receive the Stable Iodine Tablets with additional tablets provided to guest houses and house in multiple occupation.

#### **2.4.2. Industrial Zone**

There are approximately 10 private / commercial organisations within the Industrial Zone, which range from glass suppliers to off shore suppliers to cafes. All business and industrial premises have received pre-distribution of Stable Iodine Tablets to staff along with sufficient stocks for potential customers.

#### **2.4.3. Golf Course Zone**

Heysham Golf Club is a parkland course near to the village of Heysham and is situated between Heysham Power Stations and the Upper Tier COMAH Establishment, Tradebe Solvent Recycling Ltd. The Heysham Golf Club is in both Heysham Power Stations DEPZ and Tradebe Solvent Recycling Ltd PIZ.

Heysham Golf Course including the Club House, is situated within the Golf Course Zone. Heysham Golf Course is on the Emergency Notification System for both the Nuclear power stations and the COMAH site and arrangements are in place for staff, members and visitors to shelter in the club house from where they can obtain Stable Iodine Tablets.

#### **2.4.4. Nature Reserve Zone**

The Heysham Nature Reserve is 3 hectares providing walking trails through open green space & wetland habitats. The Nature Reserve is on the Emergency Notification System for Heysham Power Stations and arrangements are in place for staff, members and visitors to shelter on-site from where they can obtain the Stable Iodine Tablets. There are no other premises or organisations in this zone.

#### **2.4.5. Caravan Park Zone**

Ocean Edge Caravan Park has an approximately 800 caravans (static) on site, with approximately 5 people per caravan resulting in 4,150 people. Total population can be as high as 4,500 during July and August (high season), with the remainder of the year at around 2,000 to 2,500. It is important to note that residents are not classed as permanent as the site is usually closed for one month January to early February every year. Ocean Edge Caravan Park is on the Emergency Notification System and arrangements are in place for staff and occupiers to evacuate the caravans and take shelter within the permanent buildings on site, as caravans do not afford sufficient radiological protection, where they will obtain the Stable Iodine Tablets.

#### **2.4.6. Power Station Zone**

This zone outlines EDF Heysham Power Stations site footprint. In total, there are approximately 1500 members of staff across the two power stations at any one time.

#### **2.4.7. Dock Zone**

The Dock Zone contains Heysham Port and a number of private organisations including the Isle of Man Steam Packet Company, Stena Line and Heysham Port Railway Station. Heysham port are notified of an incident at the nuclear power stations through the Emergency Notification System; the operator of the port holds a stock of Stable Iodine Tablets for onward distribution to premises within the enclosed part of the port. The operator also holds sufficient supply for distribution to passengers passing through the port.

### **2.5. Environmental Infrastructure**

There are a number of Biological Heritage Sites (BHS) and Site of Special Scientific Interest (SSSI) close to the site. In terms of BHS, the Heysham Nature and Golf Course Reedbed are included within the existing DEPZ. Within 1km of the Site boundary, there are a number of BHS including the former refinery site and the marshes in Middleton. North heading into Heysham, there are a number of BHS within 2km of the site including Higher Heysham knoll and the coastal grassland along Heysham.

There is one single site that is both a BHS and SSSI which is the Heysham Moss land east from the EDF site. The SSSI within 2km of the site boundary are Morecambe Bay and the Lune estuary.

### **2.6. Further Information**

Under REPPIR Regulation 9, Outline Planning Zone (OPZ), information in relation to the local area, from the edge of the DEPZ to the set OPZ as defined in Schedule 5 can be found in the relevant section of the EDF Heysham Power Stations Off-Site Emergency Plan and supplementary documentation.

## 3. Determining the DEPZ

### 3.1. Introduction

This section of the report describes the decision process and justification for the changes to the DEPZ as part of this redetermination.

### 3.2. Background to Existing DEPZ

In 2002, the ONR determined the REPPIR off-site Emergency Planning and prior information area to be a circular area of radius 1km around the EDF Heysham Power Stations site. This was revised in 2009 by Lancashire County Council, to ensure that the DEPZ did not spilt local communities and ensured the inclusion of vulnerable groups immediately adjacent to the existing DEPZ. Ease of action of emergency responders and the distribution of public information was also taken into account, along with ensuring the DEPZ followed natural boundaries such as roads, rivers, footpaths to aid identification and understanding of the zone.

### 3.3. Site Operator Minimum Distance Area

As confirmed by the Site Operators revised Consequence Report received on 19<sup>th</sup> January 2020, the minimum distance area set by the report has been agreed at 1.45km. As per Regulation 8 (1), Lancashire County Council must determine the DEPZ on the basis of this recommendation.

### 3.4. Walk around DEPZ

During February 2020, colleagues from Lancashire County Council and Lancashire Constabulary completed a walk around the options for the revising DEPZ in line with the minimum distance area presented in the Consequence Report. This was the first step in the evidence base for the determination process. The following objectives were agreed for the walk:

- To confirm that the natural boundaries used for the DEPZ as detailed in maps and photography are correct.
- Opportunity to review and get a visual of the boundaries used for the DEPZ.
- Review proposed areas of inclusion with the DEPZ including any properties on the outline that could be included as DEPZ Pockets.
- Ensuring maximum, or as close as possible, access can be achieved around the DEPZ for Emergency Services and members of the public.

[Annex C](#) details comments made during the visit including any actions that need to be picked up outside of the DEPZ determination process. The key points noted through the walk are as follows:

- Changes to the DEPZ are noted [under 3.7](#); the size of the DEPZ has now increased to 2.3km with moderate changes including new residents.
- There is an increase of 450 premises (both residential and commercial) within the revised DEPZ. The total of premises within the DEPZ has increased from 256 to approximately 706.



- Action required to ensure there is more communication and information available within the DEPZ about the site. The walk during February 2020 noted there were no signs or information visible in public areas e.g. canal towpath, beach; and this will need addressing as part of the on-going planning process.
- Three options to be presented to the Multi-Agency Meeting in February 2020 on how best to follow natural boundaries in the southern area of the DEPZ.

All key notes from walk around the DEPZ were to be presented at the Multi-Agency Meeting with key partners.

### 3.5. Multi-agency Consultation

In February 2020, as per the Regulations (Guidance 8(1)), a Multi-Agency Consultation meeting was held to review the comments made following the walk around the DEPZ. This meeting gave multi-agency partners the opportunity to consult on the findings of the revised shape of the DEPZ and suggest any further options. The meeting raised a number of key suggestions, which have been considered in making the decision on the DEPZ; the suggestions have been put into [sections 3.5 to 3.9](#) of this report. Minutes from the meeting are available on request.

It was agreed by partners that the revised DEPZ and the justification presented is correct, can be clearly visible for both Emergency Services putting cordons in place and for members of the public. The revised DEPZ for Heysham is pragmatic as it does not bisect any boundaries or communities, with the changes being made to be moderate in comparison to the existing DEPZ.

It was agreed at the meeting that out of the three options presented for the southern area of the DEPZ, that Option A *'we follow the minimum distance area line as set by EDF, however for enforcement purposes, Middleton Towers and Middleton Leisure, officers to be placed there so they do not go any further along the beach'* is the most pragmatic and justified compared to Options B and C.

It was agreed with Tradebe Solvent Recycling Ltd now within the DEPZ, a meeting will need to be arranged to discuss what arrangements in to be place in the event of an Off-Site Nuclear Emergency. An action has been placed on the REPPiR 2019 Action Tracker which Lancashire County Council oversee.

It was noted that whilst land to the south of Tradebe Solvent Recycling Ltd was owned by Lancaster City Council and is actively being promoted for development. This area was now within the revised DEPZ and should any planning applications come in for the area, this would go through the normal procedures as per the **Emergency Planning Consultation Process for Planning Applications & REPPiR Sites Version 1.0**.

### 3.6. Protective Actions

As stated by the Site Operator in the Consequence Report, the protective action remains the same as previously i.e. a single message of Shelter and use of Stable Iodine prophylaxis for the whole of the DEPZ for EDF Heysham Power Stations. There were no clear justifications for changing the protective action raised by Multi-Agency organisations at the consultation meeting nor subsequently.

### 3.7. Changes to the DEPZ

As per Regulation 8(1) and the supplementary guidance, the DEPZ should only be extended due to the local geographic, demographic and practical issues. Due to the change in the Minimum Distance Area as identified in the Consequence Report by the site operator, the following changes have been agreed by the walk around DEPZ and the Multi-Agency Consultation Meeting in February 2020:

- 1) ***The DEPZ to follow the two Minimum Distance Areas as identified by Site Operator in the Consequence Report, out to Seaward. This follows good practice recommended by Regulator which was communicated at the ACOP Workshop in July 2019 and supplementary guidance emails.***
- 2) ***Increase the DEPZ north of site which allows for a smooth connection between seaward side to land; following the coastal footpath onto the road network (Headlands Road, Barrows Lane & Smithy Lane). From the road network, the revised DEPZ follows a clearly visible boundary line (footpath onto Delamere Road & Combermere Road) through the estate in Heysham Village.***
- 3) ***Agreed to include Trumacar Primary School within the DEPZ and not as previously agreed in September 2019 as a Pocket of DEPZ; continues to follow a clearly visible natural boundary onto the A589 which connects to the A683 at the roundabout.***
- 4) ***Due to the difficulty in finding a clear natural boundary that would be a balance from the objectives set in section 3.4 it was agreed to follow Tradebe Solvent Recycling Ltd Public Information Zone (PIZ). This follows A683, turning right at the roundabout onto Imperial Road.***
- 5) ***Increase the DEPZ south from Imperial Road to Main Ave and follow a clearly visible footpath through Middleton Nature Reserve. The DEPZ would continue through the nature reserve and then onto Carr Lane.***
- 6) ***It was agreed at the multi-agency meeting, that Option A was justified as it followed a clearly visible boundary along the footpath as the previous DEPZ had done and that the DEPZ follows the minimum distance set by EDF in the Consequence Report.***

Please see [Annex C](#) for further details including justification maps and photo evidence.

### 3.8. Pockets of DEPZ within in the OPZ

Consideration of " DEPZ Pockets" within the Outline Planning Zone were considered at the multi-agency consultation meeting and by the evidence gathered on DEPZ walk by the decision makers in the determination of the DEPZ. However, all were in agreement that there was no sensible or reasonable argument for applying protective action outside the DEPZ for EDF Energy Heysham Power Stations, based on the information and Minimum Distance Area provided in the Consequence Report.

### 3.9. Review of DEPZ

In accordance with Regulation 8(5) – 8(6), it was agreed at the Multi-Agency Consultation Meeting (February 2020) the DEPZ will be reviewed if one of the following occurs:

- A significant development occurs within or adjacent to the local area which may impact on the factors that are considered by the Local Authority when determining the detailed emergency planning zone;
- Changes to the distribution of or addition of new vulnerable groups;
- Changes to the infrastructure facilitating an emergency plan such as a new road;
- Changes affecting the emergency responders facilitating an emergency plan such as new or closed fire station, new or closed hospital, reduced services such as closing an A&E department.
- Changes to the area which necessitate a re-determination may also include significant temporary changes in the area which will be in place for an extended period of time (i.e. the development of a large construction village to support a significant infrastructure project).
- Receipt of the consequence report from the site operator made after an evaluation in accordance with Regulation 6(1) or 6(2) may also prompt a review of the DEPZ.

The review process of the DEPZ will be placed into the Lancashire REPPiR Generic Plan (Box 2) for future information.

## Annex A: EDF Heysham Power Stations 1.45km Minimum Distance Area



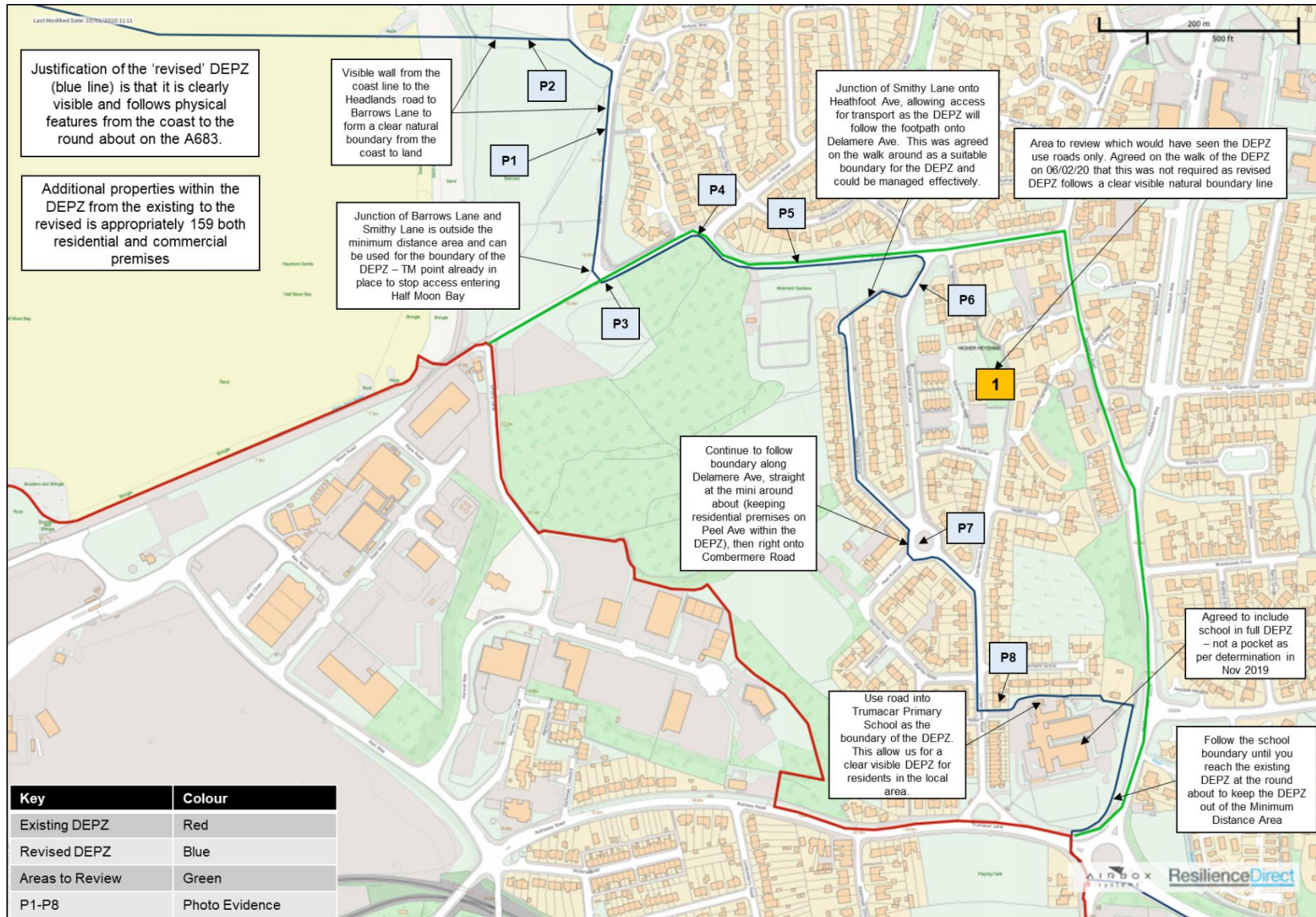
Key	Colour
Site Boundary	Black
1.45km Minimum Area	Blue



## Annex B: Overview Map of DEPZ

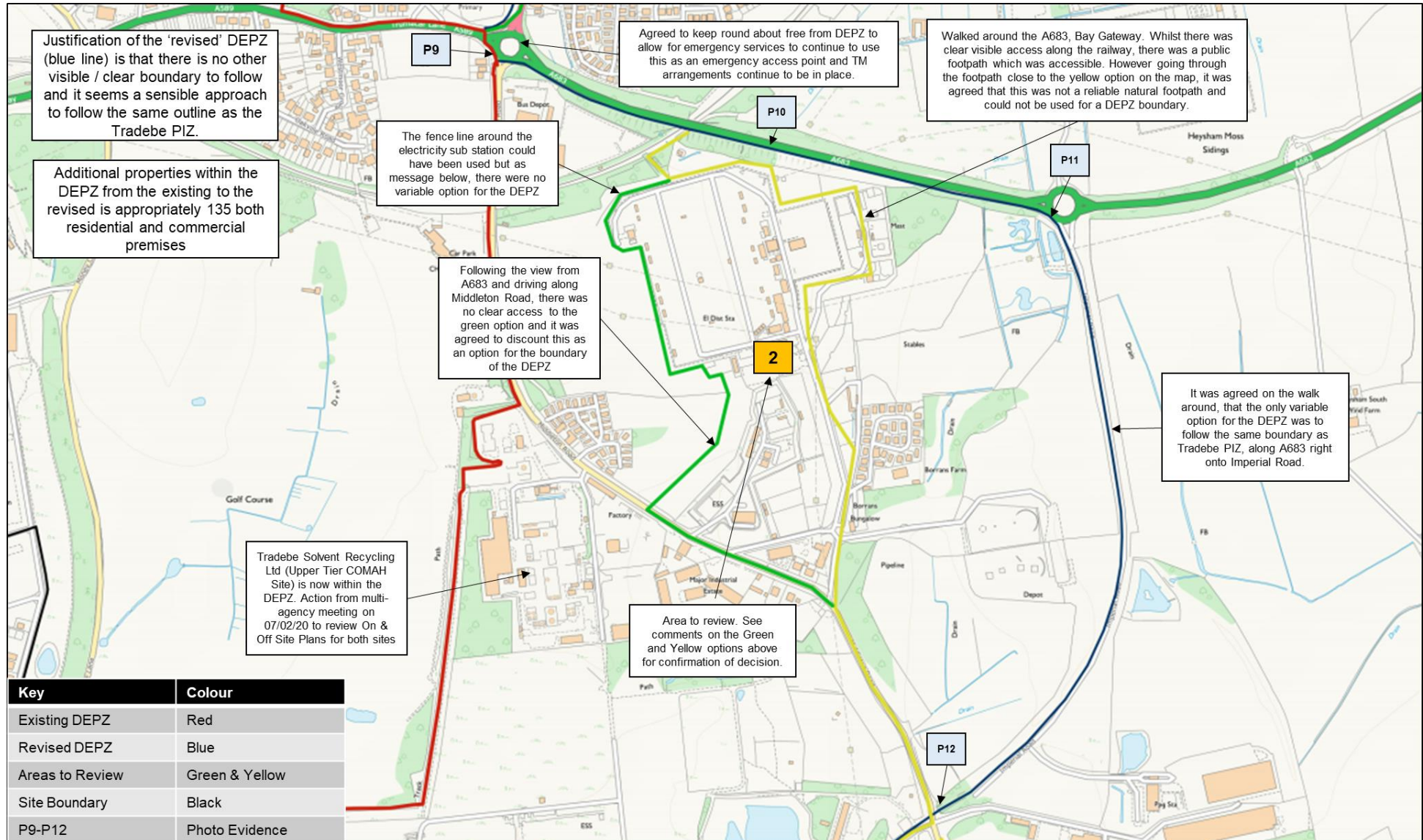


# Annex C1: Justification Map – Northern Area of the DEPZ

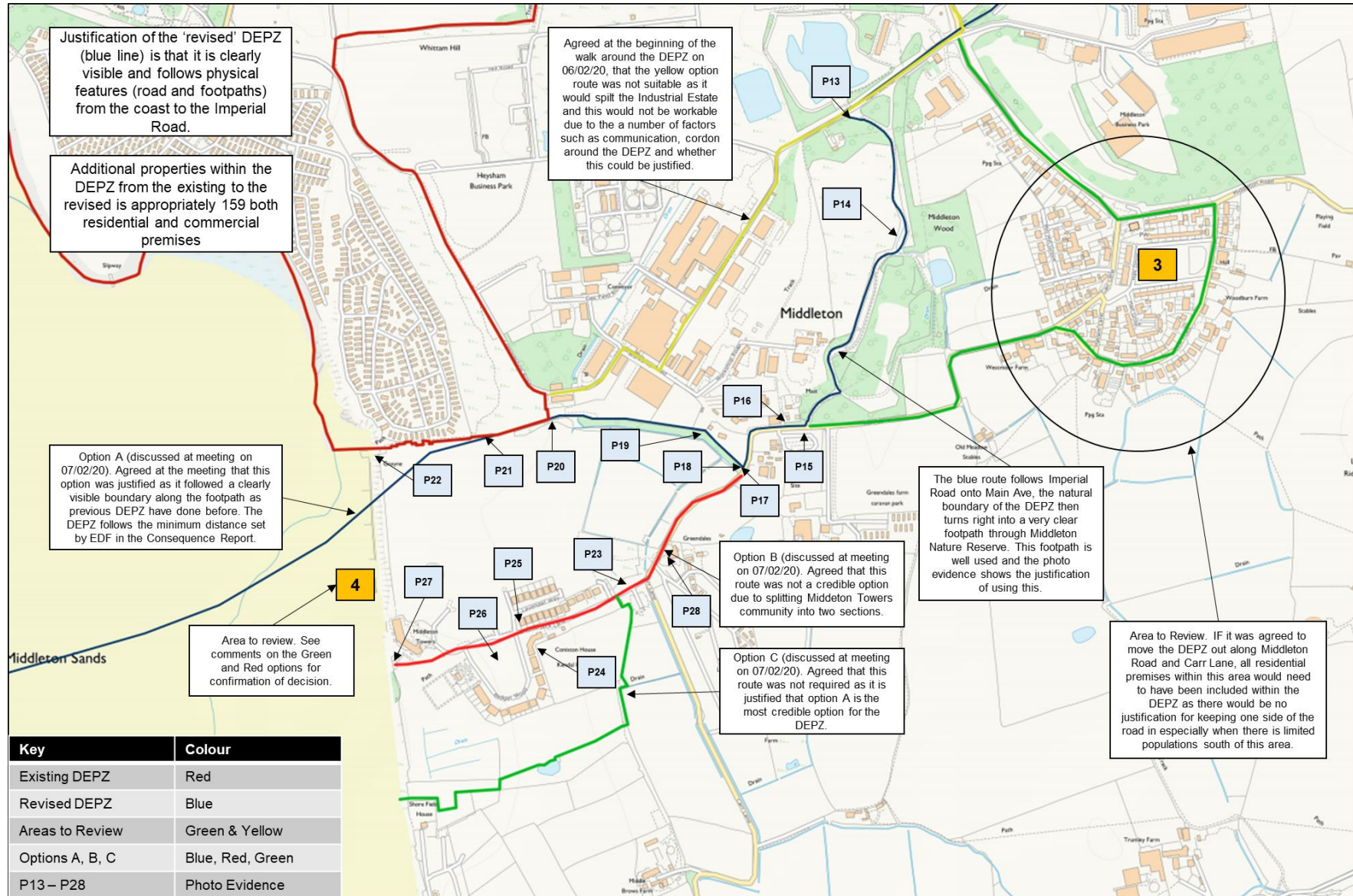




## Annex C2: Justification Map – Central Area of the DEPZ



# Annex C3: Justification Map – Southern Area









## Annex D1: Photo Evidence for Northern Area of the DEPZ

<p>P1</p> 	<p>Photo from the wall that connects the DEPZ from coast / sea to land. The wall connects to Headlands road and Barrows Lane to give a clear natural boundary of using physical features to outline the DEPZ.</p>	<p>P5</p> 	<p>Photo shows on the right hand side to Smithy Lane an allotment area which is now within the DEPZ. <b>Action to be taken to ensure the allotment is properly informed.</b></p>
<p>P2</p> 	<p>Photo shows the wall that connect from Barrows Lane to the coast. Natural feature that allows for a visible DEPZ boundary.</p>	<p>P6</p> 	<p>Junction of Smithy Lane onto Heathfoot Ave, allowing access for transport as the photo shows, the DEPZ will follow the footpath onto Delamere Ave. This was agreed on the walk around as a suitable boundary for the DEPZ and could be managed effectively.</p>
<p>P3</p> 	<p>Photo shows looking down Barrows Lane with the junction to Smithy Lane on the left hand side. This can be used for the boundary of the DEPZ – TM point already in place to stop access entering Half Moon Bay.</p>	<p>P7</p> 	<p>As photo shows, continue to follow the boundary along Delamere Ave, straight on at the mini round about (keeping premises on the right of the photo within the DEPZ).</p>
<p>P4</p> 	<p>Photo shows Smithy Lane junction with Cyprus Road. Agreed that the natural DEPZ to follow Smithy Lane. Potential <b>TM point required at this junction as residents can be turned away and can go north onto Berwick Way.</b></p>	<p>P8</p> 	<p>As photo shows, continue down Combermere Road until you see the left turning into Trumacar Primary School which will be used as the boundary of DEPZ. This allows us for a clear visible DEPZ for residents in the local area.</p>

## Annex D2: Photo Evidence for Central Area of the DEPZ

<p>P9</p> 	<p>Photo shows view from A683 with the DEPZ moving along the road on the right hand side and going forwards moving the down the A684 towards the next round about.</p>
<p>P10</p> 	<p>Photo shows within the hedge line there is a public footpath along the A683 which lines down to the electricity sub station. However as points raised on the map, there is no visible or suitable boundary for the DEPZ to go.</p>
<p>P11</p> 	<p>Photo shows the round about from the A683 and turning right onto Imperial Road which will be used as the natural boundary for the DEPZ – in line with Tradebe PIZ.</p>
<p>P12</p> 	<p>Photo shows that Imperial Road is behind the tree line here. Plans are in line to develop Imperial Road onto the junction of Middleton Road and Main Ave.</p>



## Annex D3: Photo Evidence for Southern Area of the DEPZ

	<p>Photo taken from Main Road and shows access to Middleton Nature Reserve. Photo evidence shows visible natural boundary using the footpath for the DEPZ.</p>		<p>Access to Footpath via Carr Lane.</p>
	<p>Small bridge and footpath clearly visible through Middleton Nature Reserve.</p>		<p>Key Point to Note. Opposite Carr Lane Footpath. Sulby Tate Kennels &amp; Cattery</p>
	<p>Middleton Nature Reserve access to Carr Lane.</p>		<p>Photo shows the footpath well defined and useable as a natural boundary as the DEPZ with a fence line on the right hand side of the photo.</p>
	<p>View down Carr Lane following entry via Middleton Nature Reserve</p>		<p>Photo shows the footpath continuing towards Ocean Edge Caravan Park with the fence line still on the right hand side.</p>

	<p>Photo taken to show edge of footpath into Ocean Edge Caravan park which shows a visible footpath can be used by customers of the caravan park if required.</p>		<p>Photo shows bungalows within Middleton Towers to show the different types of properties within the community.</p>
	<p>Photo shows view from edge of Ocean Edge Caravan Park via the coastline with the Power Stations in the distance. Key especially if evacuating the caravan park as we will not be able to use the coast line for this activity.</p>		<p>Photo shows Middleton Tower Bowling Green area in the middle of the community.</p>
	<p>Photo shows access from Natterjack Lane into Middleton Towers.</p>		<p>Key Point to Note. Photo taken on the edge of Middleton Towers on the coast where there are benches. Photo looking back towards Middleton Leisure Centre which could potentially be used if required.</p>
	<p>Photo shows Middleton Towers block of flats</p>		<p>Key Point to Note. Middleton Pub on Carr Lane is available to the pub and is a short distance from the footpath access to Ocean Edge Caravan Park.</p>

## Annex E: Revised DEPZ Zones

