



An Roinn Iompair
Department of Transport

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Department of Transport

Climate Adaptation Strategy for Regional & Local Roads

Technical Annex 1 - Critical Infrastructure Routes

February 2023



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Purpose

The purpose of this document is to define a process which Local Authorities can use to identify Critical Infrastructure Routes.

Critical Infrastructure Routes are those parts of the Regional and Local road network which are of greatest importance from a social, economic or emergency response perspective.

Background

The Department of Transport (DoT) has published their *Climate Adaptation Strategy for Regional and Local Roads* which sets out the steps that should be taken by the Local Authority sector to ensure the climate resilience of assets which make up the Regional and Local road network in Ireland.

The measures proposed in that document are mainly based on making incremental changes to existing operation and maintenance processes in order to deliver climate adaptation, such as:

- Identifying the types of climate related failures that occur most commonly.
- Identifying where these failures have occurred in the past and the areas of the network which may be most vulnerable to them in the future.
- Inspecting these locations progressively starting with those which are highest risk.
- Developing potential schemes to improve climate resilience.
- Prioritising these schemes using a cost-benefit approach.
- Implementing these schemes.
- Monitoring effectiveness and continually improving the process.

Even though this approach is based on making relatively modest enhancements to the existing processes, it is nevertheless a challenge to roll this out across the entire Regional and Local road network.

In order to assist Local Authorities in the implementation of the required climate adaptation measures, the DoT has developed a methodology for identifying those parts of the network which are of greatest importance from a social, economic, and emergency response perspective. These are known as Critical Infrastructure Routes.

This will assist the rollout of climate adaptation measures by enabling Local Authorities to concentrate early efforts on the most critical elements of the network. Knowing which parts of the network are most critical will also assist in broader decision making and policy development in the future. For example, the location of Critical Infrastructure Routes may be used by the DoT when allocating funding to Local Authorities under certain funding streams.

Scope

The scope of what should be considered when developing this methodology for identifying Critical Infrastructure Routes was defined follows:

- *Critical Infrastructure Routes are defined as the critical access routes within a network and their attendant infrastructure (such as bridges) that provide an essential service for the daily life of communities and upon which both socio-economic wellbeing and effective emergency response depends.*
- *During an emergency event, Critical Infrastructure Routes play an important role by ensuring accessibility of emergency assistance to affected areas, access to health facilities, power stations and to all the other strategic facilities and the continuation, after the emergency, of the productive activities of a given region.*
- *Proper planning and maintenance of Critical Infrastructure Routes prevent many of the harmful effects induced by extreme weather events.*

Based on this, the two main criteria which will determine whether a particular section of the road network should be categorised as a Critical Infrastructure Route are (i) whether the route is important for social or economic reasons; and (ii) whether the route is important for emergency response reasons.

Research and Consultation

Before developing the methodology, research was undertaken to identify whether there was already an existing process for the identification of critical routes in a public road network in a similar jurisdiction.

As part of this research, the following documents were reviewed.

- *Application of Multi Criteria Decision Making (MCDM) Approach to Evaluate Strategic Importance of Lifeline Components* published by Disaster Research Nexus (October 2012).
- *National Investment Framework for Transport in Ireland, Background Paper 12: Rural and Regional Accessibility* published by the Department of Transport.
- *Strategic Emergency Management Guideline 3 - Critical Infrastructure Resilience - Version 2* published by the Department of Defence (July 2021).
- *Strategic Emergency Management Guideline 4 - Climate Change Adaptation* published by the Department of Defence (December 2020).

This methodology was developed in consultation with the project working group which included representatives from the DoT, the City & County Management Association's Climate Action & Transport Networks (CCMA CATN) committee, 5 Local Authorities, Munster Technological University (MTU), the Road Management Office (RMO) and the Climate Action Regional Office (Atlantic Seaboard South).

The research and consultation process established a number of key points, and these are described below.

There is limited literature available, for similar jurisdictions to Ireland, relating to the identification of critical sections of a road network from a social, economic, or emergency response perspective.

Most available literature deals with issues which are more specific (such as seismic events on bridges) or issues such as the identification of all infrastructure which is of national importance such as telecommunications, policing or financial services. These are subject to analysis by a broader stakeholder group and outside the remit of this project.

The *National Investment Framework for Transport in Ireland, Background Paper 12: Rural and Regional Accessibility* examines the impacts of route closures in the context of National Secondary roads in Ireland based on the use of the National Transport Model. The complexity of the Regional and Local road network means that a similar approach is not feasible in this case.

The same document considers road criticality based on the length of diversion while ignoring traffic volumes. This captures small communities which are disproportionately impacted if a route was to close thus requiring a long diversion. This could have emergency response implications in cases where ambulance or fire service is required.

Local Authorities have already established Winter Routes which have been classified as Priority 1, Priority 2, and Priority 3 based on importance. It was accepted by the working group that these are already an effective way to identify and classify routes in terms of their social and economic importance.

Guiding Principles

Based on the outcomes from the research and consultation, and number of guiding principles were agreed with the working group, and these were used as the basis for developing this methodology.

1. The methodology should concentrate on the emergency response aspects. In this way, the Winter Routes could be used in parallel with the Critical Infrastructure Routes which will be identified by this methodology, to address both socio-economic and emergency response functions.
2. Critical Infrastructure Routes should be identified based on Strategic Facilities which serve an important emergency response, social or economic function. Routes should then be identified which provide a reliable / resilient access from such facilities, and from island or isolated communities, to the wider road network.
3. The methodology should assume that the National road network is already reliable, in good condition, well maintained, and has good resilience (e.g. via alternative routes). Therefore, reliable access need only be identified from Strategic Facilities to the National road network as this will ensure good connectivity to the wider road network.
4. In urban areas, the density of the Regional road network is such that a simpler approach might be justified. In these situations, connecting Strategic Facilities to the Regional road network might be sufficient if the Regional road network is dense enough that it provides multiple viable onward connections back to the National road network.

For example, Figure 1 shows the RNLI lifeboat station in Skerries in Fingal, County Dublin. In this case, the Critical Infrastructure Route extends to the Regional road network at the R127/R128. This was considered sufficient as there are multiple viable options to reach the M1 using Regional roads from this point and this redundancy provides sufficient resilience as the probability that all of these options would be unavailable at the same time is low.

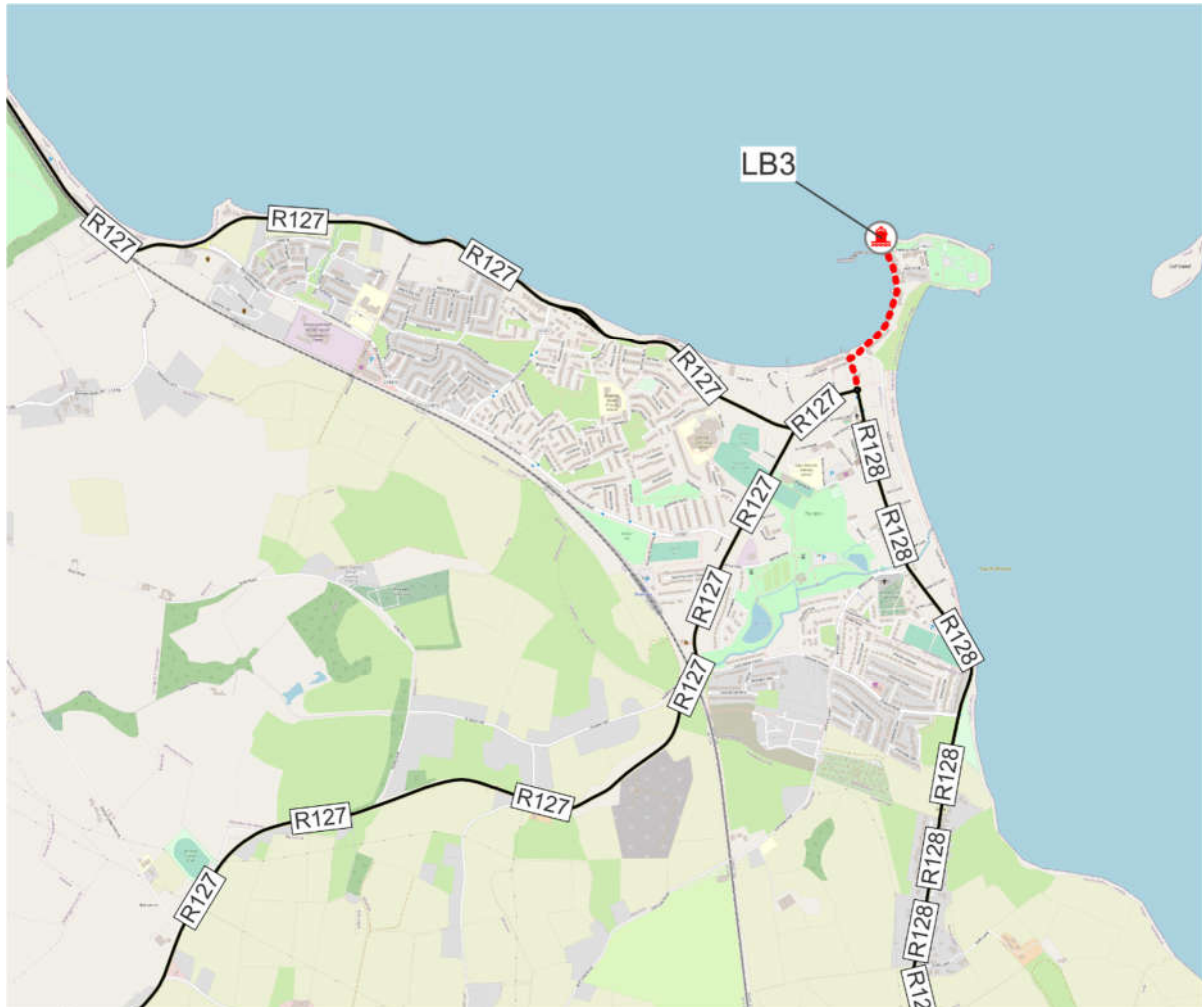


Figure 1

The Methodology

Based on the guiding principles listed above, a methodology for identifying Critical Infrastructure Routes has been developed as follows:

1. Identify all of the following Strategic Facilities in the area in question.
 - a. Local Authority Maintenance Depots
 - b. RNLI Lifeboat Stations
 - c. Hospitals / Ambulance Centres
 - d. Ports
 - e. Food Distribution Centres
 - f. Fire Stations
 - g. Power Stations
 - h. Island or isolated communities with only one road access route.

2. Identify Critical Infrastructure Routes which will connect each of these Strategic Facilities to the wider road network as follows:
 - a. In rural areas, the Critical Infrastructure Routes should be the shortest practical routes which connect Strategic Facilities to the National road network.
 - b. In urban areas, the Critical Infrastructure Routes should be the shortest practical routes which connect the Strategic Facilities to the Regional road network.
 - c. In all areas, bridges and causeways which are the only road access to island communities should be designated as Critical Infrastructure Routes. The Critical Infrastructure Route in these cases should extend to the next road junction on either side of the bridge or causeway.
 - d. In all areas, roads which are the only access to isolated communities should be designated as Critical Infrastructure Routes. In this case, consideration of local circumstances is critical and should take account of the number of houses impacted and the level of difficulty that would be required to construct a temporary alternative access on an emergency basis. As a guide, roads which are the only access to more than 20 houses, and where the construction of an emergency access would be impractical, should be designated as Critical Infrastructure Routes unless agreed otherwise with the DoT.

Verification of the Methodology

In order to verify the outcomes, the methodology described above was implemented in three test areas i.e. the Municipal District of West Clare, the Municipal District of Loughrea and in Fingal County Council. These areas were chosen to represent rural areas, areas around provincial towns, and urban areas respectively. These three scenarios are representative of most situations that will occur across the country.

The resulting Strategic Facilities and Critical Infrastructure Routes which were identified are summarised in the table below.

Name of Area	Number of Strategic Facilities	Number of Strategic Facilities which required Critical Infrastructure Routes	Number of Strategic Facilities which did not require Critical Infrastructure Routes	Length of Critical Infrastructure Route (km) (Based on road centreline)
Municipal District of West Clare	16	11	5	23.9 km
Municipal District of Loughrea	13	12	1	38.8 km
Fingal County Council	20	17	3	11.9 km

Full details of the results of applying the methodology to these three test areas are shown in Appendices A and B.

It should be noted that the purpose of this exercise to apply the methodology to these three test areas was to demonstrate the concept. The list of Strategic Facilities used in the test areas is a broad sample rather than a comprehensive list and the selection of routes in some cases required engineering judgement in order to find a route which was practical. As a result, the actual routes and Strategic Facilities in these areas should still be verified by the relevant Local Authorities as changes may be needed due to local knowledge or recent changes.

Next Steps

Local Authorities should use the methodology described in this document to identify Critical Infrastructure Routes in their respective areas.

When using this methodology, some of the Critical Infrastructure Routes may cross Local Authority boundaries and therefore consultation with adjacent Local Authorities will be required.

The nature of identifying Strategic Facilities and then choosing the best Critical Infrastructure Route for each one will at times require local knowledge and some engineering judgment. For example, there may be more than one viable route option to choose from and deciding which island or isolated communities to include will require careful consideration of local circumstances.

Given the requirement for judgement in some areas, it may be beneficial in the long term to undertake a check of all Critical Infrastructure Routes on a national basis to ensure a consistent approach across all Local Authorities. This check could be undertaken by the DoT or others acting on their behalf.

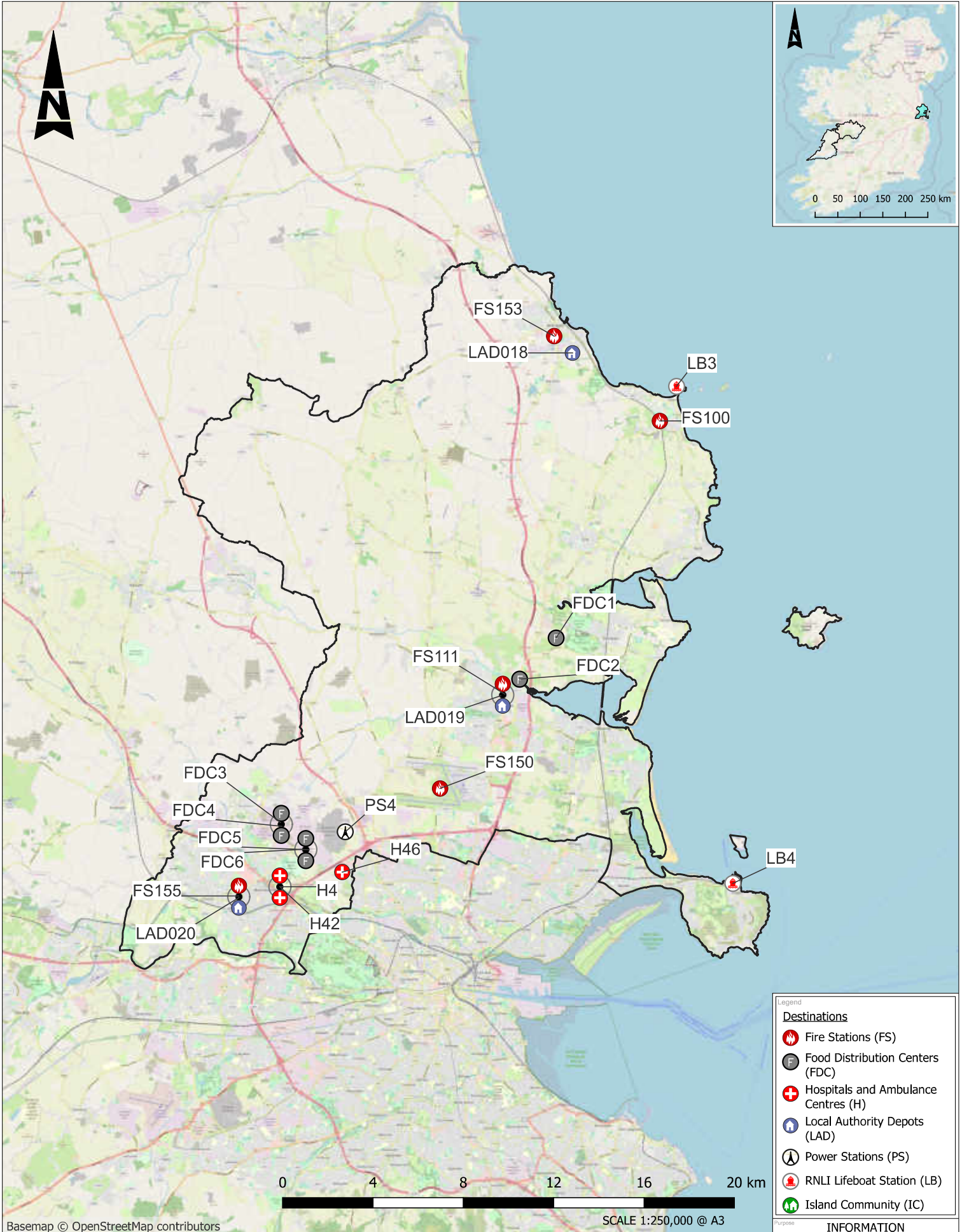
The final routes should be stored in a GIS shapefile format to facilitate transfer to the MapRoad system in future if required. This file should contain a point layer showing each Strategic Facility as a separate feature, and a line layer showing each Critical Infrastructure Route as a separate feature¹.

Note that in applying this approach across the entire country, some situations may arise which were not encountered in the three test areas. For that reason, the methodology may need to be updated in future to reflect such situations if they occur.

¹ Local Authorities should confirm the specific file format with the Road Management Office in advance.

Appendix A - Overview of the three test areas





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SCALE 1:250,000 @ A3

Legend	
Destinations	
	Fire Stations (FS)
	Food Distribution Centers (FDC)
	Hospitals and Ambulance Centres (H)
	Local Authority Depots (LAD)
	Power Stations (PS)
	RNLI Lifeboat Station (LB)
	Island Community (IC)

INFORMATION

Client	Climate Action Regional Office		
Project	Development of Critical Infrastructure Routes		
Title	OVERVIEW OF STUDY AREAS - FINGAL COUNTY COUNCIL -		
Original Scale	1:250,000 @ A3	Design/Drawn	MT
Date	23.01.23	Checked	DK
Date	23.01.23	Drawn	DK
Date	23.01.23	Authorized	DK
Status	Drawing Number		Rev
	5209631_HTR_GIS_1_1_3		3



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Legend

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLB Lifeboat Station (LB)
- Island Community (IC)

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SCALE 1:500,000 @ A3

INFORMATION			
Original Scale	Design/Drawn	Checked	Authorized
1:500,000 @ A3	MT	DK	DK
Date	23.01.23	Date	23.01.23
Date	23.01.23	Date	23.01.23
Status	5209631_HTR_GIS_1_2_3	Rev	3



Client
Climate Action Regional Office

Project
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Rev	Description	By	Date	Chk'd	Auth'd
1	Overview of Study Areas	NS	01/07	MT	DK
2	Overview of Study Areas	MT	08/11	DK	DK
3	Overview of Study Areas	MT	23/01	DK	DK



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SCALE 1:450,000 @ A3

Legend	
	Fire Stations (FS)
	Food Distribution Centers (FDC)
	Hospitals and Ambulance Centres (H)
	Local Authority Depots (LAD)
	Power Stations (PS)
	RNLI Lifeboat Station (LB)
	Island Community (IC)

INFORMATION

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Project		Original Scale		Design/Drawn		Checked/Authorised	
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		Date		Date		Date	
		23.01.23		23.01.23		23.01.23	

Status	Drawing Number	Rev
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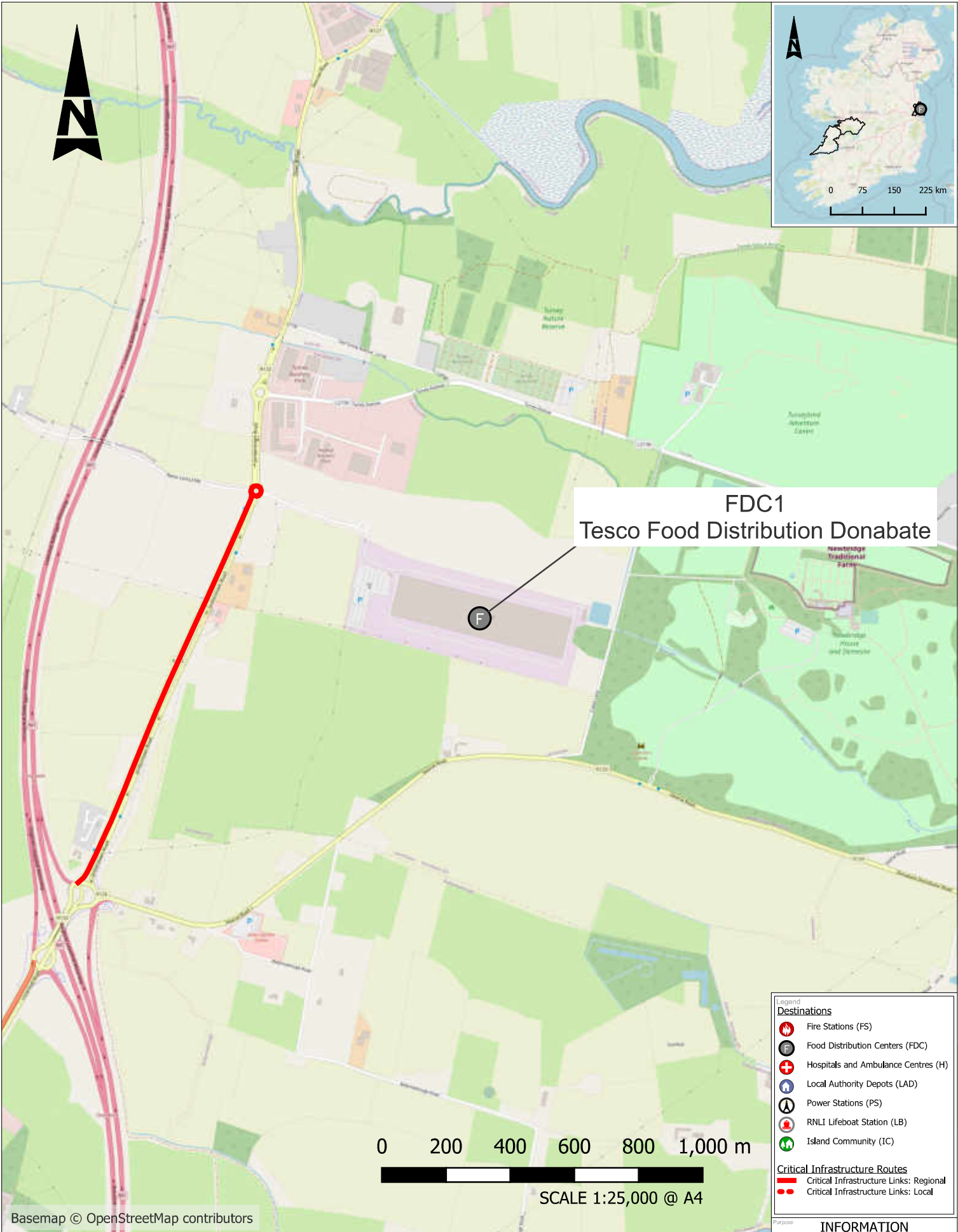
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Rev	Description	By	Date	Chk'd	Auth
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2	Overview of Study Areas	MT	08/11	DK	DK
3	Overview of Study Areas	MT	23/01	DK	DK

Appendix B - Critical Infrastructure Routes identified in the three test areas





FDC1
Tesco Food Distribution Donabate

F

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

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Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION			
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Authorised		Date	
DK		23.01.23	
DK		23.01.23	
DK		23.01.23	

Rev	Description	By	Date	Check	Date
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2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
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Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes



FDC2
C&C Cold Storage Solutions

F

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

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INFORMATION			
Client	Climate Action Regional Office		
Title	DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FDC2		
Original Scale	1:25,000 @ A4	Design/Drawn	MT
Check	DK	Drawn	DK
Authorised	DK	Date	23.01.23
Status	5209631_HTR_GIS_2_3	Date	23.01.23
Number	3		



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2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
3	Destinations & Critical Infrastructure Routes	HT	23/01	DK	DK

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Development of Critical Infrastructure Routes



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3	Destinations & Critical Infrastructure Routes	HT	23/01	DK	DK

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INFORMATION			
Title	DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FDC3		
Original Scale	1:25,000 @ A4	Design/Drawn	MT
		Check/Rev	DK
		Date	23.01.23
		Date	23.01.23
Status	5209631_HTR_GIS_2_3	Rev	3



FDC4
CGI Cold Stores

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

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INFORMATION			
Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FDC4			
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Status	Drawn/Issue	Date	Date
	5209631_HTR_GIS_2_3	23.01.23	23.01.23
Project Number			Rev
5209631_HTR_GIS_2_3			3



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Project: Development of Critical Infrastructure Routes

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Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION

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Date: 23.01.23	Date: 23.01.23	Date: 23.01.23	Date: 23.01.23
Status:	Drawing Number: 5209631_HTR_GIS_2_3	Revision:	3

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Project: Development of Critical Infrastructure Routes



FDC6
Dunnes Stores Warehouse

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION

Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FDC6

Original Scale	1:25,000 @ A4	Design/Drawn	MT	Checked	DK	Authorised	DK
Date	23.01.23	Date	23.01.23	Date	23.01.23	Date	23.01.23
Status	5209631_HTR_GIS_2_3	Revision					3

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SCALE 1:25,000 @ A4

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FS100
Skerries Fire Station

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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INFORMATION			
Title			
DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS100			
Purpose			
Development of Critical Infrastructure Routes			
Client			
Climate Action Regional Office			
Project			
Development of Critical Infrastructure Routes			
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3	Destinations & Critical Infrastructure Routes	HT	23/01	DK	DK

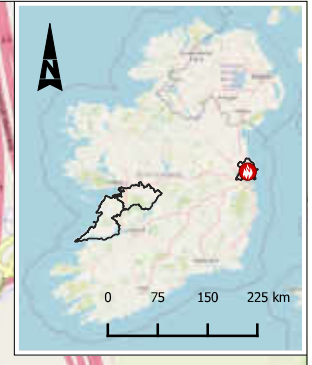
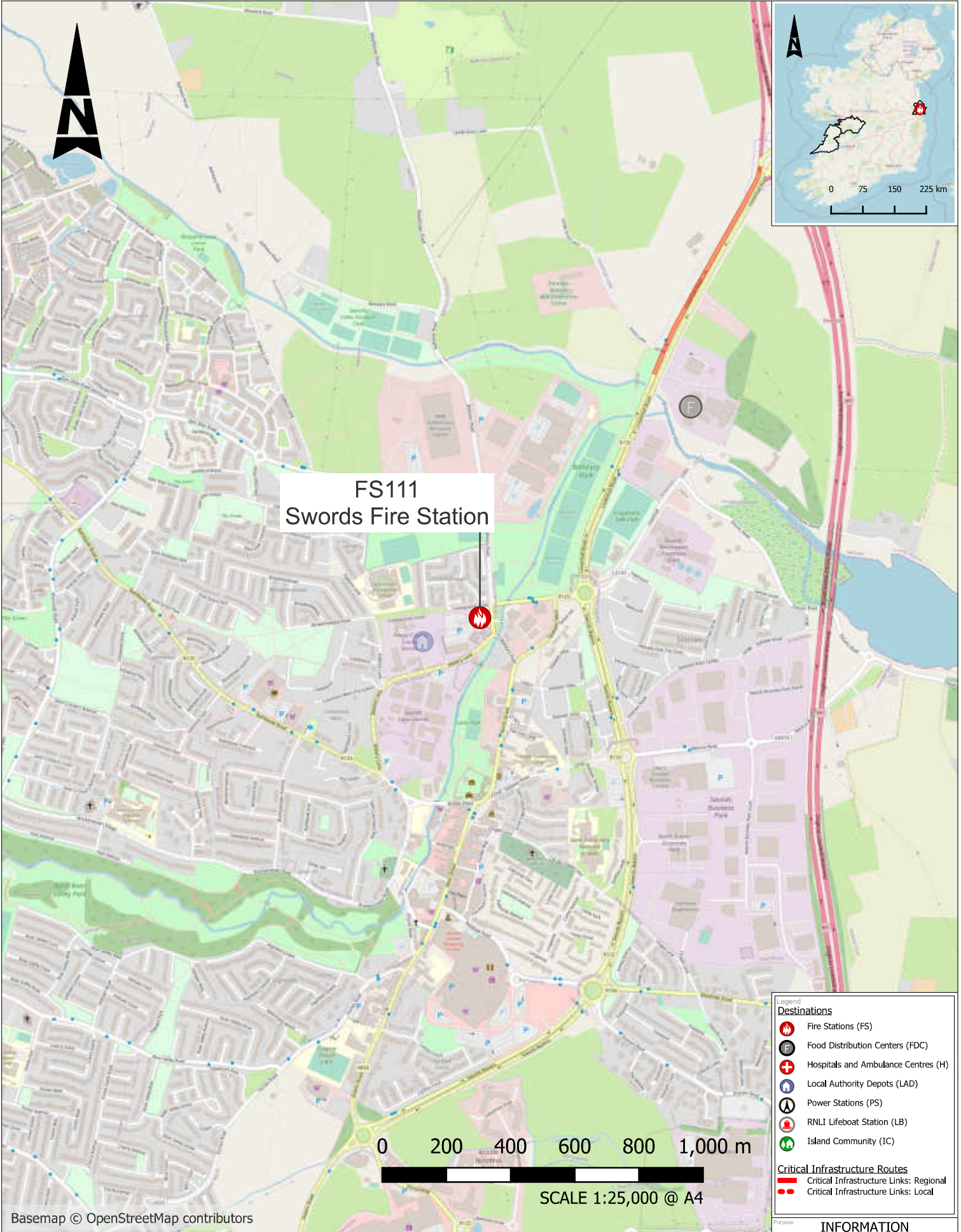
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Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes



FS111
Swords Fire Station

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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SCALE 1:25,000 @ A4

INFORMATION

Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS111

Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes

Original Scale	1:25,000 @ A4	Design/Drawn	MT	DK	DK
Date	23.01.23	Check	23.01.23	Date	23.01.23
Status	5209631_HTR_GIS_2_3	Drawn Number		Authorised	3



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FS150
Dublin Airport Fire Station

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION

Client		Title		
Climate Action Regional Office		DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS150		
Project		Original Scale	Design/Drawn	Checked
Development of Critical Infrastructure Routes		1:25,000 @ A4	MT	DK
		Status	Drawings Number	Revision
			5209631_HTR_GIS_2_3	3

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Client
Climate Action Regional Office

Project
Development of Critical Infrastructure Routes



**FS153
Balbriggan Fire Station**

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

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INFORMATION			
Client		Climate Action Regional Office	
Project		Development of Critical Infrastructure Routes	
Original Scale	1:25,000 @ A4	Design/Drawn	MT
		Checked	DK
		Date	23.01.23
		Authored	DK
		Date	23.01.23
Status	5209631_HTR_GIS_2_3	Rev	3

1	Destinations & Critical Infrastructure Routes	NS	01/07	MT	DK
2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
N/A	Destinations & Critical Infrastructure Routes	HT	23/01	DK	DK

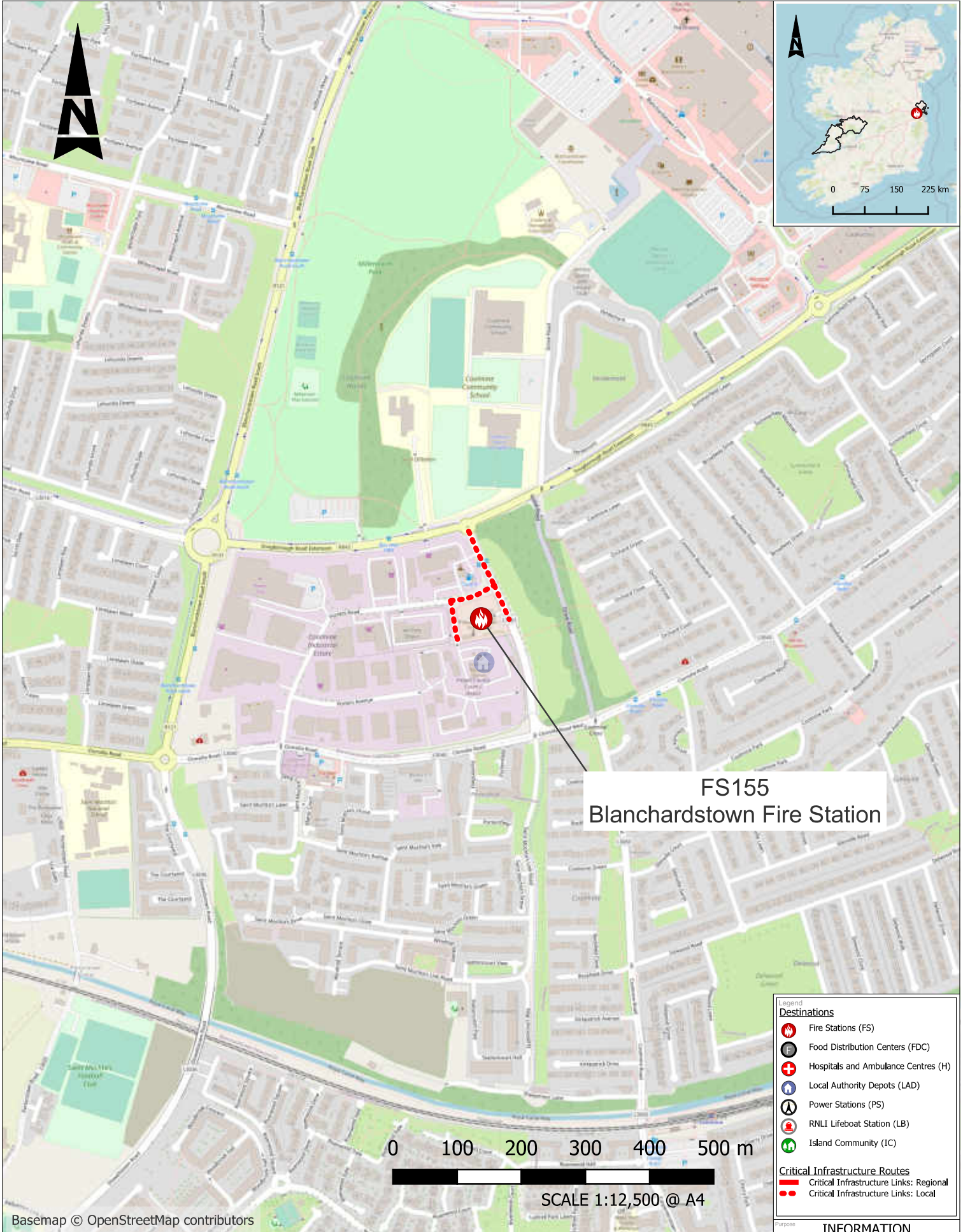
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Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes



FS155
Blanchardstown Fire Station

0 100 200 300 400 500 m

SCALE 1:12,500 @ A4

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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				Client: Climate Action Regional Office Project: Development of Critical Infrastructure Routes			INFORMATION Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS155		
	1 Destinations & Critical Infrastructure Routes NS 01/07 MT DK 2 Destinations & Critical Infrastructure Routes MT 08/11 DK DK 3 Destinations & Critical Infrastructure Routes 19/1 23/01 23/01 23/01	Atkins House, 150-155 Ainslie Business Park, Cork Airport Business Park, Cork Swards, Co. Dublin Tel (+353) 01 810 8000 Fax (+353) 01 810 8001			Unit 2B, 2200 Cork Airport Business Park, Cork Parkmore Technology Park, Galway Tel (+353) 021 429 0300 Fax (+353) 021 429 0360			Original Scale: 1:12,500 @ A4 Design/Drawn: MT Check/Rev: DK Date: 23.01.23 Drawing Number: 5209631_HTR_GIS_2_3 Revision: 3	



FS19
Ennistymon Fire Station

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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					Client: Climate Action Regional Office			Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS19					
	1 Destinations & Critical Infrastructure Routes NS 01/07 MT DK 2 Destinations & Critical Infrastructure Routes MT 08/11 DK DK 3 Destinations & Critical Infrastructure Routes 19/1 23/01 DK/1 DK/1				Project: Development of Critical Infrastructure Routes			Purpose: INFORMATION					
Atkins House, 150-155 Ainslie Business Park, Swords, Co. Dublin Tel (+353) 01 810 8000 Fax (+353) 01 810 8001				Unit 2B, 2200 Cork Airport Business Park, Cork Tel (+353) 021 429 0300 Fax (+353) 021 429 0360				1st Floor Technology House Parkmore Technology Park, Galway Tel (+353) 091 786 050 Fax (+353) 091 779 830					
				Original Scale: 1:25,000 @ A4				Design/Drawn: MT Date: 23.01.23		Checked: DK Date: 23.01.23		Authorised: DK Date: 23.01.23	
				Status:				Drawing Number: 5209631_HTR_GIS_2_3		Rev: 3			



FS2
Kilkee Fire Station

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

0 200 400 600 800 1,000 m
 SCALE 1:25,000 @ A4

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					Client: Climate Action Regional Office Project: Development of Critical Infrastructure Routes			INFORMATION Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS2			
	1 Destinations & Critical Infrastructure Routes NS 01/07 MT DK 2 Destinations & Critical Infrastructure Routes MT 08/11 DK DK 3 Destinations & Critical Infrastructure Routes 19/11 23/01 23/01 23/01	Atkins House, 150-155 Ainslie Business Park, Swords, Co. Dublin Tel (+353) 01 810 8000 Fax (+353) 01 810 8001	Unit 2B, 2200 Cork Airport Business Park, Cork Tel (+353) 021 429 0300 Fax (+353) 021 429 0360	1st Floor Technology House Parkmore Technology Park, Galway Tel (+353) 091 786 050 Fax (+353) 091 779 830	Original Scale: 1:25,000 @ A4 Status:	Design/Drawn: MT Date: 23.01.23	Checker: DK Date: 23.01.23	Authorised: DK Date: 23.01.23	Drawing Number: 5209631_HTR_GIS_2_3 Rev: 3		



FS201
Kilrush Fire Station

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

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Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION			
Purpose	Title		
Development of Critical Infrastructure Routes	DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS201		
Original Scale	Design/Drawn	Checked	Authorised
1:25,000 @ A4	MT	DK	DK
Status	Date	Date	Date
5209631_HTR_GIS_2_3	23.01.23	23.01.23	23.01.23
Drawings Number	Rev		
3	3		



Client
Climate Action Regional Office

Project
Development of Critical Infrastructure Routes

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Rev	Description	By	Date	App'd
1	Destinations & Critical Infrastructure Routes	NS	01/07	MT
2	Destinations & Critical Infrastructure Routes	MT	08/11	DK
3	Destinations & Critical Infrastructure Routes	MT	23/01	DK



FS202
Gort Fire Station

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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INFORMATION			
Title			
DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES FS202			
Purpose			
Development of Critical Infrastructure Routes			
Original Scale			
1:25,000 @ A4			
Design/Drawn			
MT	DK	DK	DK
Date			
23.01.23	23.01.23	23.01.23	23.01.23
Status			
5209631_HTR_GIS_2_3			
Number			
3			

An Roinn Iompair
Department of Transport

Rev	Description	By	Date	Checked	Date
1	Destinations & Critical Infrastructure Routes	NS	01/07	MT	DK
2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
3	Destinations & Critical Infrastructure Routes	HT	23/01	DK	DK

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Client
Climate Action Regional Office

Project
Development of Critical Infrastructure Routes



FS35
Loughrea Fire Station

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

0 200 400 600 800 1,000 m

SCALE 1:25,000 @ A4

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INFORMATION			
Client		Climate Action Regional Office	
Project		Development of Critical Infrastructure Routes	
Original Scale	Design/Drawn	Checked	Authorised
1:25,000 @ A4	MT	DK	DK
Status	Drawings Number	Date	Date
	5209631_HTR_GIS_2_3	23.01.23	23.01.23
			3

1	Destinations & Critical Infrastructure Routes	NS	01/07	MT	DK
2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
19.9	Destinations & Critical Infrastructure Routes	HT	23/01	DK	DK

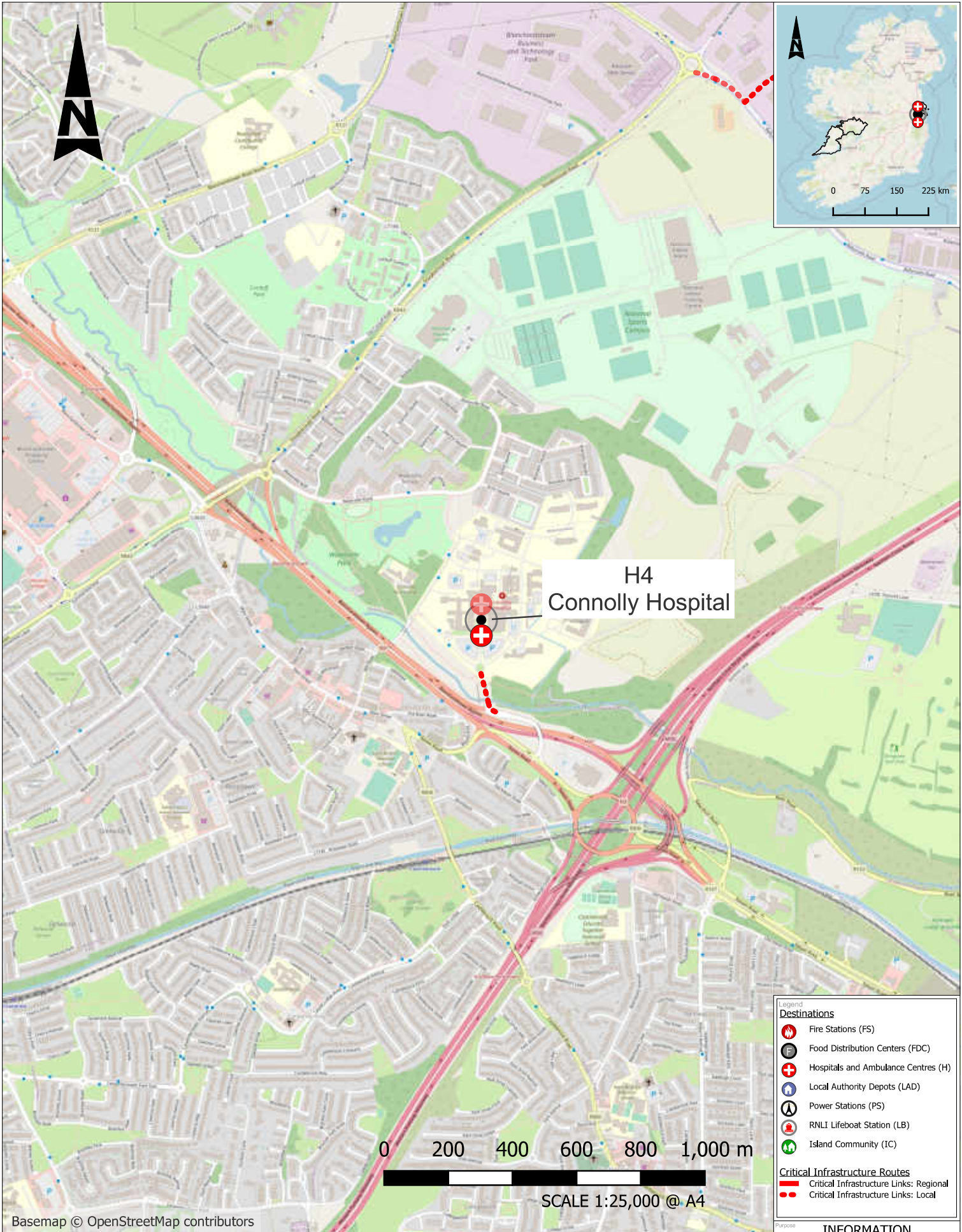
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Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes



Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION

Title: DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES H4

Original Scale	1:25,000 @ A4	Design/Drawn	MT	Checked	DK	Authorised	DK
Date	23.01.23	Date	23.01.23	Date	23.01.23	Date	23.01.23
Status	5209631_HTR_GIS_2_3	Drawings Number		Revision			3

An Roinn Iompair
Department of Transport

1	Destinations & Critical Infrastructure Routes	NS	01/07	MT	DK
2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
3	Destinations & Critical Infrastructure Routes	MT	23/01	DK	DK

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Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes



H42
CHI at Connolly

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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SCALE 1:25,000 @ A4

INFORMATION			
Title			
DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES H42			
Original Scale		Design/Drawn	Checked
1:25,000 @ A4		MT	DK
Status		Date	Date
5209631_HTR_GIS_2_3		23.01.23	23.01.23
		Authorised	Authorised
		DK	DK
		23.01.23	23.01.23



Client
Climate Action Regional Office

Project
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H46
Cappagh National Orthopaedic Hospital

Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

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SCALE 1:25,000 @ A4

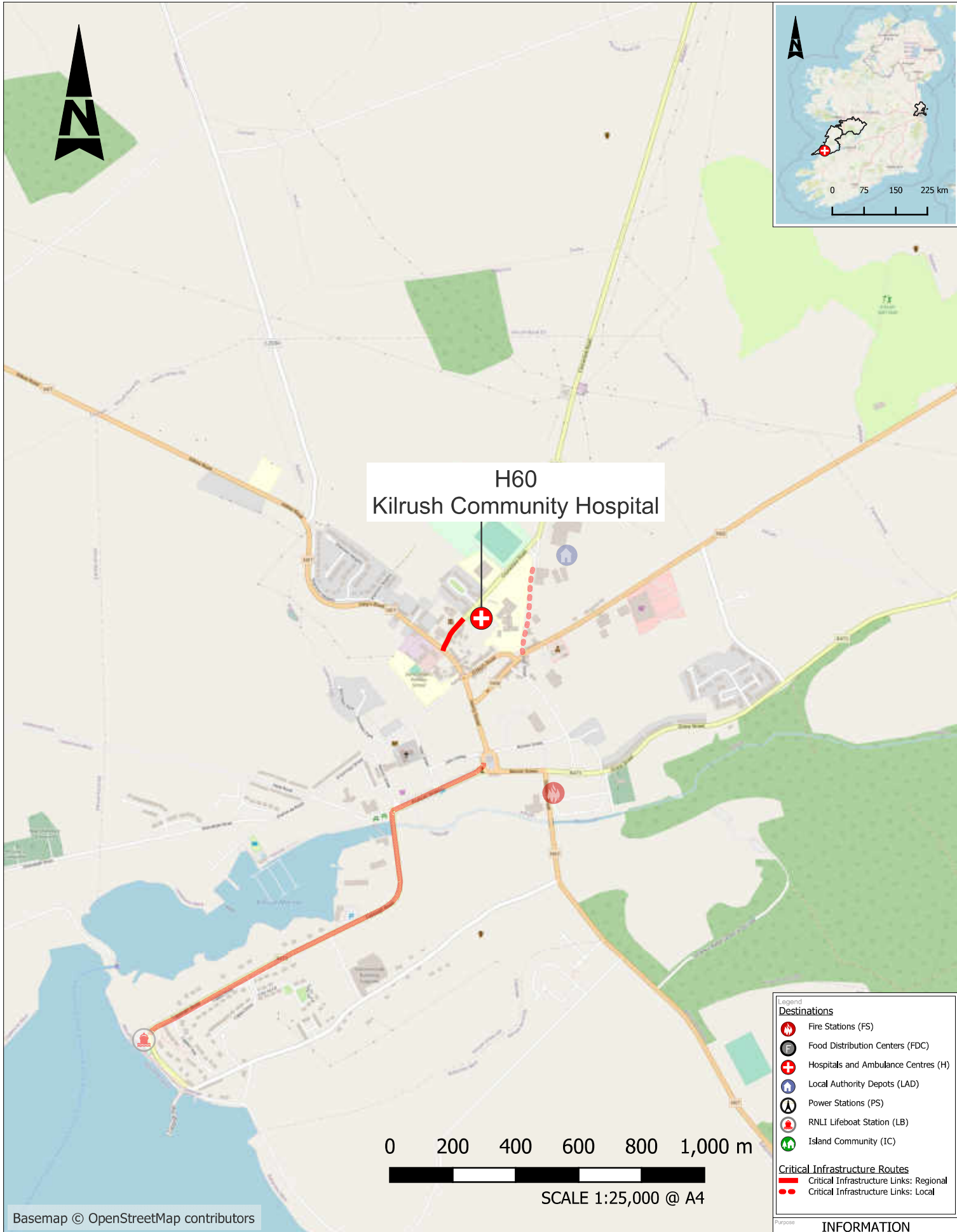
INFORMATION			
Title			
DESTINATIONS & CRITICAL INFRASTRUCTURE ROUTES H46			
Purpose			
Development of Critical Infrastructure Routes			
Client			
Climate Action Regional Office			
Project			
Development of Critical Infrastructure Routes			
Original Scale		Design/Drawn	
1:25,000 @ A4		MT DK DK	
Status		Drawing Number	
		5209631_HTR_GIS_2_3	
Date		Date	
23.01.23		23.01.23	
Author		Date	
DK		23.01.23	
3			



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Legend

Destinations

- Fire Stations (FS)
- Food Distribution Centers (FDC)
- Hospitals and Ambulance Centres (H)
- Local Authority Depots (LAD)
- Power Stations (PS)
- RNLI Lifeboat Station (LB)
- Island Community (IC)

Critical Infrastructure Routes

- Critical Infrastructure Links: Regional
- Critical Infrastructure Links: Local

INFORMATION

Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes

Original Scale	1:25,000 @ A4	Design/Drawn	MT	Checked	DK	Authorised	DK
Date	23.01.23	Date	23.01.23	Date	23.01.23	Date	23.01.23
Status		Drawing Number	5209631_HTR_GIS_2_3		Rev	3	

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1	Destinations & Critical Infrastructure Routes	NS	01/07	MT	DK
2	Destinations & Critical Infrastructure Routes	MT	08/11	DK	DK
3	Destinations & Critical Infrastructure Routes	HT	23/01	DK/1	DK/1

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Client: Climate Action Regional Office

Project: Development of Critical Infrastructure Routes