

Hornsea Project Three
Offshore Wind Farm



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Preliminary Environmental Information Report:
Annex 7.4 – Construction Vehicle Trip Generation Assumptions

Date: July 2017

Environmental Impact Assessment

Preliminary Environmental Information Report

Volume 6

Annex 7.3 – Construction Vehicle Trip Generation Assumptions

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This report is also downloadable from the Hornsea Project Three offshore wind farm website at:

www.dongenergy.co.uk/hornseaproject3

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Front cover picture: Kite surfer near one of DONG Energy's UK offshore wind farms © DONG Energy Hornsea Project Three (UK) Ltd., 2016.

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List of Tables

Table 1: Construction Vehicle Trip Generation Assumptions3

Summary

This annex provides assumptions that have been used to calculate construction vehicle trip generation projections, as set out in volume 3, chapter 7: Traffic and Transport.

Units

Unit	Description
ft	Feet (distance)
km	Kilometre (distance)
m	Metre (distance)
m ²	Metres squared (area)
m ³	Metres cubed (volume)
mm	Millimetre (distance)
mph	Miles per hour (speed)
t	Tonne (weight)

Table 1: Construction Vehicle Trip Generation Assumptions.

Unit	Description
Trenchless Technology Site	
Number of staff per Trenchless Technology site	8-13 staff
Staff mode share	75% single occupancy car
Duration of works at each Trenchless Technology site	3 months minimum
Cable Route	
Rate of construction	3 months per location (per 750m, but calculate as per km to fit minimum construction duration)
% of haul road surfaced with aggregate	100%
Width of haul road to calculate amount of aggregate	5 m
Depth of aggregate used for haul road	0.6 m
Tonnes of material per HGV	20 t
Trenches	2 trenches
Width of trenches	7 m at surface
% of compounds assumed to be surfaced with aggregate	50%
Depth of aggregate surfacing at compounds	0.3 m
Staff per work front (5 work fronts operating at any one time)	20 staff
Staff Mode Share	75% single occupancy car
Minimum diameter of ducting	275 mm [estimate based on 220mm diameter cables]
Length of cable per delivery (1 cable roll per HGV)	750 m
% of cable route requiring ducting	100%
Length of ducting per HGV	750 m
Length of cable route served by one HGV carrying cable tiles	800 m
Depth of imported stabilised backfill	1.5 m (max); 0.6 m (average)
% of cable route work site fenced	100%
Cable route fencing per HGV	200 m
Average length of cable route trench supports carried by 1 HGV	500 m
Excavated material exported from route	17,675 m ³ per km
Onshore HVDC Converter/HVAC Substation	
Onshore HVDC converter/HVAC substation Total HGV Movements	26,012 movements

Unit	Description
Duration of onshore HVDC converter/HVAC substation construction	3 years
Staff	82 staff on site per day
Mode share	50% single occupancy car
Number of abnormal indivisible loads	12
HVAC Booster Station	
Construction duration	12 months
Total HGV movements	6,503 movements
Average number of staff on site per day throughout duration	61 staff on site per day
Mode share	50% single occupancy car
Landfall	
Site Preparation: total HGV Movements	600 movements
Site Preparation: total non HGV Movements	1,200 movements
Site Preparation: duration	24 months
Drilling: total HGV movements	6,297 movements
Drilling: total non HGV movements	7,146 movements
Drilling: duration	18 months
Reinstatement: total HGV movements	432 movements
Reinstatement: total non HGV movements	1,106 movements
Reinstatement: duration	2 to 3 months