

Press release

Lincolnshire, Monday 15 March 2021

Project collaboration reduces construction traffic in Lincolnshire, UK

- Collaboration between two Siemens Energy construction projects avoids an additional 675 local lorry trips
- Innovative approach sees stone used to construct the Triton Knoll onshore substation reused by National Grid's Viking Link interconnector team
- Stone reuse predicted to save a total of 58 tonnes of CO₂

Inventive collaboration to reuse and recycle aggregate between two Siemens Energy projects in Lincolnshire has had a major environmental and local impact resulting in a reduction in harmful emissions and construction traffic in the Bicker Fen and Donington areas.

Around 8,768 tonnes of stone, enough to fill almost three Olympic-sized swimming pools, previously used to build a temporary access road and site accommodation for the Triton Knoll onshore substation works, will be moved to the neighbouring National Grid Viking Link interconnector project.

The initiative will save more than 58 tonnes of CO₂ in total, the equivalent of the CO₂ generated by heating 20 homes for one year. The saving has been achieved through diverting the used aggregate from landfill, and reducing the amount of new aggregate the Viking Link project will need to source meaning 675 additional lorry trips to and from each site will be avoided in total.

The aggregate will be used to build an access road on Viking Link for the high voltage cabling works and converter station civil works.

Mark Pilling, Head of Large Transmission Solutions, Siemens Energy, said: "We are committed to most efficient use of materials throughout the supply chain, to keep materials circulating and ensuring resources can be recovered and reused, eliminating waste. I am delighted to see such an inventive solution agreed between our customers. Not only will reusing this material save

CO₂ from the quarrying process by reducing the amount of new aggregate we would need to source, but through reducing the impact of construction traffic by more than 14,000 miles and around 675 lorry trips, air quality in the area will also be improved."

Mike Elmer, Project Director, Viking Link said: "We are really pleased to be able to work with Siemens Energy and recycle the stone from Triton Knoll for our Viking Link project. It not only reduces our carbon output but also minimises disruption for local residents. We will continue to look for other ways to reduce our carbon emissions wherever possible throughout the construction of Viking Link."

Julian Garnsey, Project Director for Triton Knoll and RWE, said: "We are committed to reducing emissions and contributing towards sustainable development. Taking the time to consider sustainable solutions to business challenges is environmentally beneficial, and often also makes social and commercial sense. Collaborating with Siemens Energy and National Grid to reuse material from the Triton Knoll construction in another local project is a great example of this."

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Notes to editors

Picture credit: Source Siemens Energy

Calculations

Lorry movements (miles and trips)

Round-trip distance from Triton Knoll onshore substation site to local landfill site is 22 miles and it would take 439 lorry trips to transport 8,768 tonnes of stone if each vehicle can carry 20 tonnes. Total mileage 9,658 miles.

Round-trip distance from local quarry to Viking Link interconnector site is 14 miles and it would take 439 lorry trips to transport 8,768 tonnes of stone if each vehicle can carry 20 tonnes. Total mileage 6,146 miles.

However, to transport some of the stone from Triton Knoll to Viking Link will require 203 lorry movements, travelling a total of 6 miles. Total mileage 1,218 miles.

Trips: $439 + 439 = 878 - 203 = 675$

Miles: $9,658 + 6,146 = 15,804 - 1,218 = 14,586$

CO₂ avoided:

The conversion factors taken from the *Greenhouse gas reporting: conversion factors 2019 Department for Business Energy and Industrial Strategy* show 1.39179 kgCO₂/mile for an articulated diesel HGV (>3.5 – 33t), 75% laden. CO₂ emitted from 14,586 miles travelled is **20.2 tonnes**

According to the Mineral Product Association's (MPA) 2009 Sustainability Report, the production of one tonne of virgin aggregate emits 4.3kg of carbon dioxide. Therefore, using 8.8 tonnes less virgin aggregate would save **37.8 tonnes** of CO₂ emissions.

Energy Catapult Analysis shows that in 2017, the average household generated 2,745 kg of CO₂ emissions from heating <https://energysavingtrust.org.uk/significant-changes-are-coming-uk-heating-market/>.

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For further information on Siemens Energy sustainability commitments please see,

<https://www.siemens-energy.com/global/en/company/sustainability.html>

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