



NJUG CASE STUDY

CASE STUDY 12: Carbon Footprint Calculator

The National Joint Utilities Group (NJUG) is the UK industry association representing utilities on street works issues. The thirty-eight utility companies¹ we represent work to deliver gas, electricity, water and telecommunications to both individual consumers and UK plc.

NJUG members need to continue to drive forward further improvements. We have therefore developed the NJUG Vision for Street Works, which revolves around six main principles:

1. Safety is the number one priority
2. Damage to underground assets is avoided
3. Utilities work together and in partnership with local authorities to minimise disruption
4. Utilities deliver consistent high quality
5. Utilities maximise the use of sustainable methods and materials
6. Street works in the UK are regarded as world class

This case study is an example of NJUG delivering on these principles and turning the Vision into a reality.

Overview:

Carillion Utility Services is a leading service provider for utility companies, focussing on the renewal and maintenance of the United Kingdom's utility infrastructure. The company recognised that by identifying and reducing its own carbon emissions, it could assist its clients in achieving their own reduction levels.

In order to achieve this reduction Carillion worked with Enviros and Severn Trent Water to develop the Carbon Footprint Calculator. This package produces a clear representation of the relative CO₂ emissions from each process within a project, as well as identifying ownership of these emissions.

The data gathered, together with the Operational and Commercial input, enable Carillion to make more informed decisions on the techniques it uses to carry out works, whilst additionally allowing it to identify and deal with areas that are less environmentally efficient.

This case study is an example of delivering the fifth vision principle and the approach provides a platform that enables all other elements of the vision to be realised.



¹ NJUG's current members are Energy Networks Association (representing electricity and gas), Water UK (representing all water and wastewater companies), National Grid, Openreach, Virgin Media and THUS, a Cable and Wireless Business. Our associate members are Clancy Docwra, Skanska McNicholas, Balfour Beatty, Morrison, Morgan Est, NACAP, PJ Keary, First Intervention, Carillion, Enterprise and Laing O'Rourke. Including members through trade associations, NJUG represents thirty-eight utility companies.

Case Study:

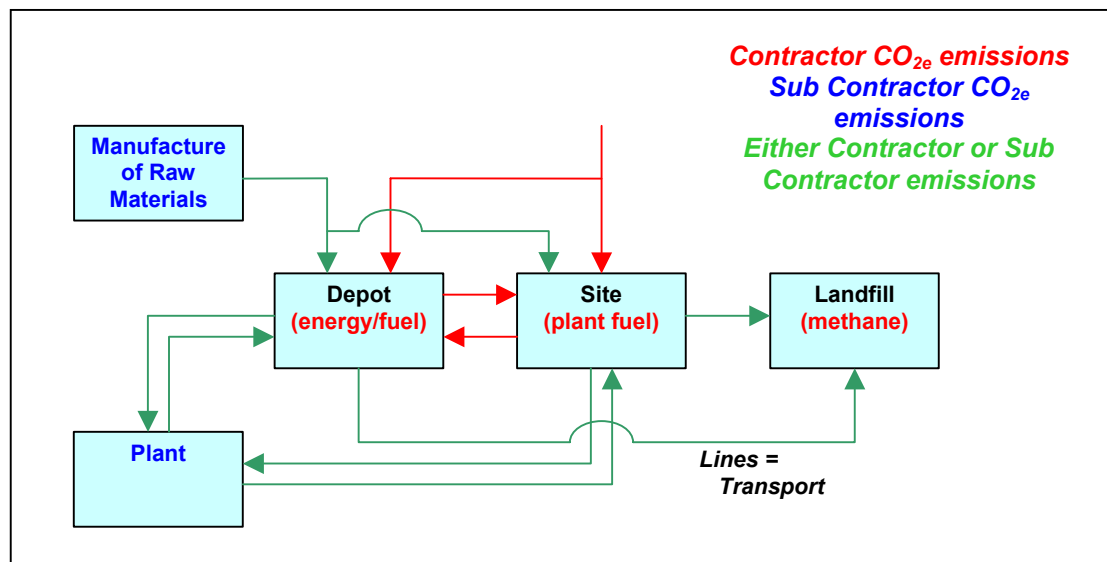
The initial drive behind this innovation was the UK Government's long term goal for a 60% reduction in carbon emissions by 2050, with real progress to be demonstrated by 2020 in line with the Kyoto protocol. Carbon calculators have been slowly introduced by various companies over the last few years, however Carillion discovered that no calculator had been developed specifically for utilities, and existing models only identified emissions from transport, energy use and waste disposal.

Two partners assisted Carillion with the development of the system and data gathering exercise. Enviro, a UK based environmental compliance consultancy, were brought in to build the spreadsheet to the requirements of the business, and Severn Trent Water, which allowed a trial of the concept on its contract.

Through the production of the Carbon Footprint Calculator, Carillion were able to:

- Influence client design processes.
- Assist clients to reduce their own carbon footprint.
- Inform clients about climate change through increased engagement.
- Assess the benefits of using low / no dig technique and smart logistics.
- Set benchmarks and improvement targets.

Diagram illustrates ownership of emissions:



The use of the calculator on Carillion's Highways work has encouraged Local Government Partners to meet their Nottingham Declaration targets and demonstrate to National Government that the partners are addressing the green agenda.

Carillion intends to develop the calculator further and implement it on each Carillion Utility Services contract. Due to the different utility disciplines involved, this will require additional data gathering and small changes to the system.

Further research into each contract will be carried out to understand which aspects of the tool can be used and which would need to be modified. Carillion is working with its clients to demonstrate the benefits of the Carbon Calculator and reinforce the company's commitment to sustainability.