



## Project Norwood - Green Site Setup

**Project Norwood is a 6-story commercial development in central Swindon for our client, Zurich. The project consists of new office space and surrounding public realm works. The project was selected to look into the benefits of a ‘green site setup’.**

As part of the site and office setup, the project team analysed the cost and carbon emissions of traditional items or services and their green alternatives. The long-term plan is to develop an easily replicable template for new projects to establish their own low-carbon sites. In total, 12 ‘green’ proposals were evaluated. These range from procuring renewable sourced energy to retrofitting site cabins with energy and water efficiency fittings.

A standard site setup was projected to emit 51,925 kgCO<sub>2</sub>e over the 15-month project programme.

To implement all 12 ‘green’ proposals would increase costs moderately, mostly to cover higher installation costs. Carbon emissions would drop to just 5,136 kgCO<sub>2</sub>e. However, the project needed to balance maximising environmental performance with financial constraints which meant

not all proposals could be implemented despite the project teams’ ambition to create a low-carbon site.

The site conducted a cost-benefit analysis on the 12 ‘green’ proposals to identify which are financially viable to implement. 6 solutions were implemented (green) and 3 were identified for further investigation (yellow) – see RAG table on next page. Also, some proposals could not be implemented following advice from the site engineers, such as installing a cabin master switch or upgrading cabin insulation. The final cost of the site setup was +3.4% (from standard) and projected to emit 7,031 tCO<sub>2</sub>e (-86.5% from standard) over the project lifetime.

This project is relatively small compared to other Skanska sites. The proposals with higher installation costs, such as PIR sensors and LED lighting upgrade, would more likely be cost

	Standard	Green Proposals	Actually Implemented
Carbon (kgCO <sub>2</sub> e)	51,925	5,136 (-90.1%)	7,031 (-86.5%)



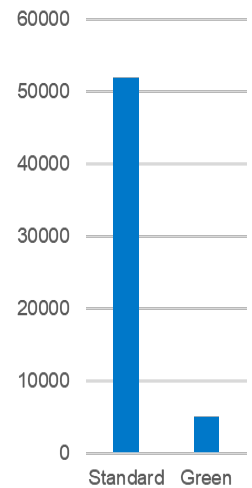
effective on larger sites. Also projects with longer programmes have longer payback periods to recoup these initial costs and benefit from the resultant operational and utility cost savings.

The main takeaway from this exercise is that significant carbon reductions are achievable at little or no additional cost even with size, programme and financial constraints. For example, the largest carbon saving is from procuring green tariff energy. This ensures all electricity supplied to site is from renewable sources at no additional cost.

There are other environmental benefits as well. WyseBase cabin foundations are slightly more expensive to initially install, but they negate the need for carbon-heavy traditional concrete bases and associated waste. They can be quickly disassembled and reused multiple times. Any damaged blocks are shredded and remoulded into new blocks in a closed-loop cycle resulting in no waste. The cabin fittings and eco-welfare block will save nearly 500,000 litres of water consumption.

It should also be noted that the office cabins themselves are being reused from another Skanska site, simultaneously extending their life, eliminating waste and saving on new rental costs.

Projected Carbon (kgCO<sub>2</sub>e)



Green Site Setup Proposals	RAG	Carbon (kgCO <sub>2</sub> e)			Water (L)		
		Standard	Green	Projected Saving	Standard	Green	Projected Saving
Install PIR sensors	●	1011	758	253			
Upgrade lighting to LEDs	●	1011	376	635			
Install cabin master switch	●	2518	1511	1007			
Upgrade cabin insulation	●						
Install tap flow restrictors	●	223	111	112	648000	324000	324000
Install rainwater harvesting	●						
WyseBase cabin bases	●	1427	0	1427			
Hybrid generator / plant	●						
Eco-spec welfare block	●	217	40	177	344250	251100	93150
Install EV charging points	●	15210	2340	12870			
Renewable energy source	●						
Procure green tariff energy	●	30308	0	30308			
		51925	5136	46789	992250	575100	417150

