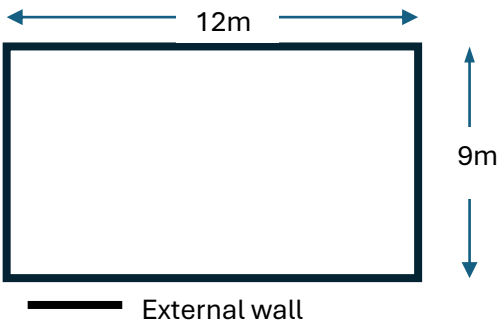
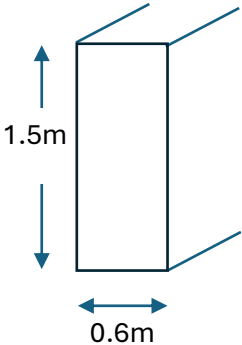
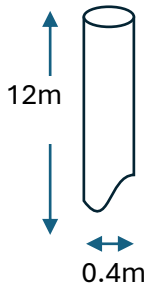


E1 – Simple detached house

Site arrangements	Input parameters																						
Site information: Site: Example#1 Property: Medium Detached 1 Site size: 4 properties	Site name Example#1 Property id: Detached house 1 No. new properties onsite 4																						
Property schematic (plan view): 	Building dimensions Maximum length (m): 12 Maximum width (m): 9 Total internal supporting wall length (m): 0 Number of additional internal walls: 0																						
0.2Geology: <table border="1"> <thead> <tr> <th>Depth(m)</th><th>Strata</th></tr> </thead> <tbody> <tr> <td>0.2</td><td>Topsoil</td></tr> <tr> <td>0.6</td><td>Made ground</td></tr> <tr> <td>1.0</td><td>Sand</td></tr> <tr> <td>>25</td><td>Clay (high PI)</td></tr> </tbody> </table>	Depth(m)	Strata	0.2	Topsoil	0.6	Made ground	1.0	Sand	>25	Clay (high PI)	Geology Topsoil base (m) 0.2 Made Ground base (m): 0.6 <table border="1"> <thead> <tr> <th>Subsoil</th><th>Depth (m)</th><th>Description</th><th></th></tr> </thead> <tbody> <tr> <td>Layer #1</td><td> 1.0 </td><td> Sand </td><td> Add layer </td></tr> <tr> <td>Layer #2</td><td> 25 </td><td> Clay highPI </td><td> Delete </td></tr> </tbody> </table>	Subsoil	Depth (m)	Description		Layer #1	1.0	Sand	Add layer	Layer #2	25	Clay highPI	Delete
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Layer #2	25	Clay highPI	Delete																				
Foundations: Strip  Pile 	Foundations Strip foundation input Strip foundation width (m) 0.6 Strip Foundation depth (m): 1.5 Strip foundation reinforced No Pile foundation input Pile foundation diameter (m) 0.4 Pile foundation depth (m): 12 % of pile length the foundation is reinforced: 50																						

E1 – Screen Results: Simple detached house 1

Optimum Foundation

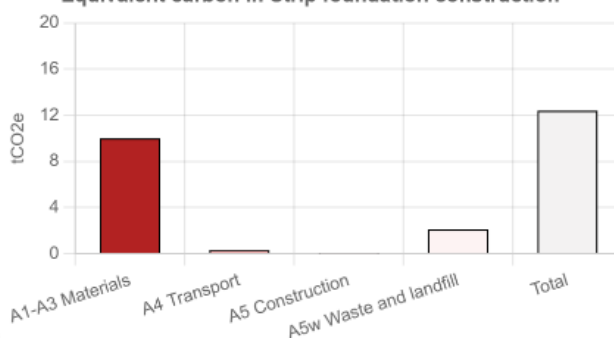
Metric	Value
Optimum foundation to save carbon	Strip
Carbon saved	4.8 tCO ₂ e
Percent saving	27.9%
Depth of strip when pile foundation becomes optimum	2.1m

Foundation Comparison

RESULTS tCO ₂ e	Strip	Pile
A1 - A3 (materials)	10	11
A4 (transport)	0	1
A5 (Construction inc. reuse and waste)	2	5
Total	12	17

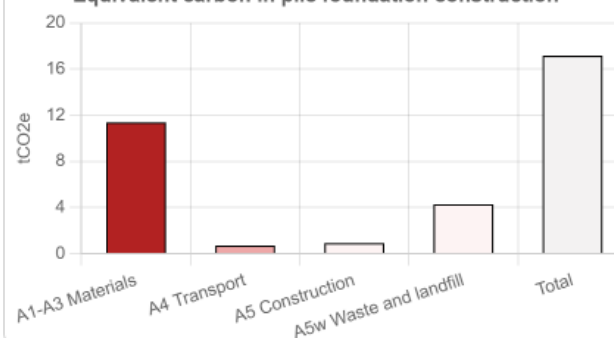
Strip Foundation Results

Equivalent carbon in Strip foundation construction



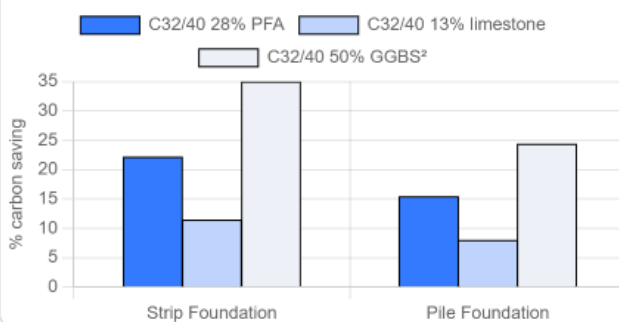
Pile Foundation Results

Equivalent carbon in pile foundation construction



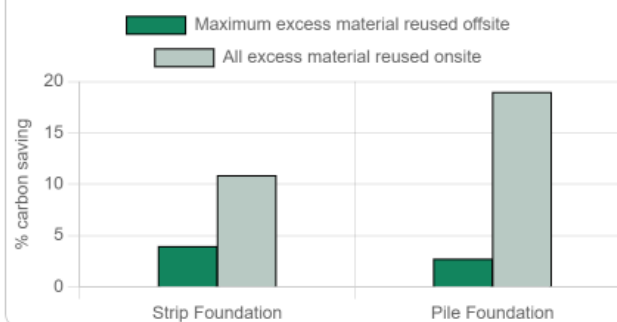
Material Reuse Impact

Carbon savings using different concretes¹



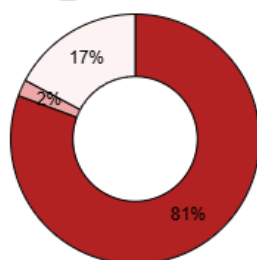
Process Reuse Impact

Material reuse carbon saving (compared to landfill disposal)



Life cycle carbon use - Strip

■ A1-A3 Material ■ A4 Transport
□ A5 Construction



Life cycle carbon use - Pile

■ A1-A3 Material ■ A4 Transport
□ A5 Construction

