



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Correction to

Citation for published version:

Thomson, RC, Chick, JP & Harrison, GP 2022, 'Correction to: An LCA of the Pelamis wave energy converter (The International Journal of Life Cycle Assessment, (2019), 24, 1, (51-63), 10.1007/s11367-018-1504-2)', *International Journal of Life Cycle Assessment*, vol. 27, no. 5, pp. 755–758.
<https://doi.org/10.1007/s11367-021-02011-y>

Digital Object Identifier (DOI):

[10.1007/s11367-021-02011-y](https://doi.org/10.1007/s11367-021-02011-y)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Publisher's PDF, also known as Version of record

Published In:

International Journal of Life Cycle Assessment

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.





Correction to: An LCA of the Pelamis wave energy converter

R. Camilla Thomson¹ · John P. Chick¹ · Gareth P. Harrison¹

Published online: 29 March 2022

© The Author(s) 2022

Correction to: The International Journal of Life Cycle Assessment (2019) 24:51–63
<https://doi.org/10.1007/s11367-018-1504-2>

The wrong Supplementary file was originally published with this article; it has now been replaced with the correct file containing the following changes:

- An incorrect table cross-reference has been removed from Table S1.1
- The quantity of “Main Generator, 175kW” has been corrected in Table S1.2
- The unit of mass transported has been corrected in the “Small lorry” and “Sea freight” sections of Table S1.3.

The original article can be found online at <https://doi.org/10.1007/s11367-018-1504-2>.

✉ R. Camilla Thomson
c.thomson@ed.ac.uk

¹ School of Engineering, Institute for Energy Systems,
University of Edinburgh, Edinburgh EH9 3DW, UK

Table S1.1 Input data for materials and manufacturing provided by PWP, with details of corresponding inventory processes and uncertainty indicator scores

Data from Manufacturer	Quantity	Unit	SD ²	Uncertainty Indicators	Selected Inventory Process
General Data					
Annual energy production	2.97	GWh	1.050	2, 1, 1, 1, 1	
Design life	20	years	1.196	4, 1, 1, 1, 1	
Recycling rate	90	%	1.204	4, 1, 1, 2, 2	
Stock Material					
Steel - cast	221982	kg	1.058	1, 1, 3, 1, 1	Steel, low-alloyed {GLO} market for
Steel - plate	345901	kg	1.058	1, 1, 3, 1, 1	Steel, low-alloyed, hot rolled {GLO} market for
Sand	475722	kg	1.058	1, 1, 3, 1, 1	Sand {GLO} market for
Stainless steel	550	kg	1.058	1, 1, 3, 1, 1	Steel, chromium steel 18/8 {GLO} market for
Nylon 6	416	kg	1.058	1, 1, 3, 1, 1	Nylon 6 {GLO} market for
Polyurethane ³	3.5	m ³	1.058	1, 1, 3, 1, 1	Polyurethane, rigid foam {GLO} market for
Glass reinforced plastic (GRP)	90	kg	1.058	1, 1, 3, 1, 1	Glass fibre reinforced plastic, polyamide, injection moulded {GLO} market for
PVC pipe	55	kg	1.058	1, 1, 3, 1, 1	Polyvinylchloride, suspension polymerised {GLO} market for ⁴
Manufacturing Processes					
Drawing of steel pipes	6383	kg	1.058	1, 1, 3, 1, 1	Drawing of pipe, steel {GLO} market for
Drawing of steel wire	460	kg	1.058	1, 1, 3, 1, 1	Wire drawing, steel {GLO} market for
Extruding plastic pipes	55	kg	1.058	1, 1, 3, 1, 1	Extrusion, plastic pipes {GLO} market for
Machining	53924	cm ³	1.206	1, 1, 3, 1, 3	Steel removed by milling, average {RER} steel milling, average ⁵
Welding	1995	m	1.058	1, 1, 3, 1, 1	Welding, arc, steel {RER} processing
Flame cutting	41	m ²	1.058	1, 1, 3, 1, 1	Approximated from gas welding. Detailed in Table S1.5.
Abrasive blasting	2025	m ²	1.058	1, 1, 3, 1, 1	Derived from published information. Detailed in Table S1.5
Painting	2025	m ²	1.058	1, 1, 3, 1, 1	Derived from published information. Detailed in Table S1.5.

³Density 110 kg/m³ from Trelleborg (2009).

⁴With pipe extrusion, as detailed under Manufacturing Processes.

⁵The PWP data for machining includes all small-scale precision removal of material, such as milling, grinding and drilling

Table S1.2 - Information on electrical components provided by PWP, with details of corresponding inventory processes and uncertainty indicator scores

Data from Manufacturer	Quantity	Unit	SD ²	Uncertainty Indicators	Selected Inventory Process
Pre-fabricated components					
Main Generator, 175kW	6	unit	1.119	1, 1, 3, 2, 3	Generator, 200kW electrical {GLO} market for ⁶
MV Switchgear and TSG Control Panel	1	unit			Derived from published information. Detailed in Table S1.9.
Transformer, 315kVA, 11kV	1	unit			Derived from published information. Detailed in Table S1.9.

⁶Generator for a gas cogeneration unit

Table S1.3 - Input data for transport of components for power conversion modules provided by PWP or estimated, with details of corresponding inventory processes and uncertainty indicator scores

Data from Manufacturer	Quantity	Unit	SD ²	Uncertainty Indicators	Selected Inventory Process
Transport					
Distance uncertainty - city of origin known			2.003	2, 1, 1, 1, 1	
Distance uncertainty - country of origin known			2.011	3, 1, 1, 1, 1	
Small lorry					
					Transport, freight, lorry 3.5-7.5 metric ton, EURO3 {RER}⁷
From UK to Methil - estimated	0.48	t	1.221	4, 1, 3, 1, 1	
From UK to Methil - manufacturer's data	1.35	t	1.094	1, 1, 3, 1, 1	
Large lorry					
					Transport, freight, lorry 16-32 metric ton, EURO3 {RER}⁷
From Scotland to Methil - estimated	0.06	t	1.221	4, 1, 3, 1, 1	
From Glasgow to Methil - manufacturer's data	0.18	t	1.094	1, 1, 3, 1, 1	
From Stonehaven to Methil - manufacturer's data	69.62	t	1.094	1, 1, 3, 1, 1	
From Nottingham to Methil - manufacturer's data	17.40	t	1.094	1, 1, 3, 1, 1	
From UK to Methil - estimated	7.86	t	1.221	4, 1, 3, 1, 1	
From Wales to Methil - manufacturer's data	9.00	t	1.094	1, 1, 3, 1, 1	
From Methil to Stornoway	106.55 ⁸	t			
Sea freight					
					Transport, freight, sea, transoceanic ship {GLO} market for
From China to Methil - estimated	0.30	t	1.221	4, 1, 3, 1, 1	
From Holland to Methil - estimated	0.30	t	1.221	4, 1, 3, 1, 1	

⁷Assuming EURO3 standard, as this has the highest emissions and is therefore the most conservative

⁸Sum of all component estimates

The original article has been corrected.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated

otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.