Supplementary material

Connectivity of the seagrass *Zostera muelleri* within south-eastern Australia

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**MANTEL tests**

*Fig. S1.* Mantel test to identify correlations between genetic distance ($F_{ST} \div (1 - F_{ST})$) and the oceanographic distance (km) between the populations for all sample sites of *Zostera muelleri*. 

\[ y = 0.0049x + 4.7922 \]

\[ R^2 = 0.1371 \]
**Fig. S2.** Mantel test to identify correlations between genetic distance ($F_{ST} \div (1 - F_{ST})$) and the oceanographic distance (km) between the western Victorian populations of *Zostera muelleri*.

**Fig. S3.** Mantel test to identify correlations between genetic distance ($F_{ST} \div (1 - F_{ST})$) and the oceanographic distance (km) between the eastern Victorian and Tasmanian populations of *Zostera muelleri*. 

**GGD WC v. GD WC**

$y = 0.0079x + 5.0325$

$R^2 = 0.0926$

**GGD EC v. GD EC**

$y = 0.0075x + 2.1074$

$R^2 = 0.6076$
Table S1. Euclidean distance between studied sites

<table>
<thead>
<tr>
<th>Location</th>
<th>Site 1 – Site 2</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curdies Inlet</td>
<td>CU1 – CU2</td>
<td>0.5 km</td>
</tr>
<tr>
<td></td>
<td>CU2 – CU3</td>
<td>0.6 km</td>
</tr>
<tr>
<td></td>
<td>CU1 – CU3</td>
<td>0.6 km</td>
</tr>
<tr>
<td>Port Phillip Bay</td>
<td>PPB1 – PPB2</td>
<td>40.4 km</td>
</tr>
<tr>
<td></td>
<td>PPB2 – PPB3</td>
<td>52.5 km</td>
</tr>
<tr>
<td></td>
<td>PPB1 – PPB3</td>
<td>16.95 km</td>
</tr>
<tr>
<td>Western Port</td>
<td>WP1 – WP2</td>
<td>17.9 km</td>
</tr>
<tr>
<td></td>
<td>WP2 – WP3</td>
<td>2.2 km</td>
</tr>
<tr>
<td></td>
<td>WP1 – WP3</td>
<td>20.8 km</td>
</tr>
<tr>
<td>Shallow Inlet</td>
<td>SH1 – SH2</td>
<td>2.4 km</td>
</tr>
<tr>
<td></td>
<td>SH2 – SH3</td>
<td>2.5 km</td>
</tr>
<tr>
<td></td>
<td>SH1 – SH3</td>
<td>0.6 km</td>
</tr>
<tr>
<td>Corner Inlet</td>
<td>CI1 – CI2</td>
<td>12.8 km</td>
</tr>
<tr>
<td></td>
<td>CI2 – CI3</td>
<td>7.9 km</td>
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<td></td>
<td>CI1 – CI3</td>
<td>14.9 km</td>
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<td>Gippsland Lakes</td>
<td>GL1 – GL2</td>
<td>29.1 km</td>
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<tr>
<td></td>
<td>GL2 – GL3</td>
<td>0.6 km</td>
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<tr>
<td></td>
<td>GL1 – GL3</td>
<td>28.6 km</td>
</tr>
<tr>
<td>Lake Tyers</td>
<td>LT1 – LT2</td>
<td>0.4 km</td>
</tr>
<tr>
<td></td>
<td>LT2 – LT3</td>
<td>2 km</td>
</tr>
<tr>
<td></td>
<td>LT1 – LT3</td>
<td>1.94 km</td>
</tr>
</tbody>
</table>