MISTAKES IN MATERIALS & RESOURCES SUBMISSIONS

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MISTAKES IN MR SUBMISSIONS GENERALLY

PROJECT OWNERS

▶ NO POLICIES ON WASTE REDUCTION
▶ Not Getting Developers / Owners commitment into policies
▶ Developers expecting Contractors to do their part but without any clear policies or procedures
▶ NO Goals and NO Monitoring and Support programs
MISTAKES IN MR SUBMISSIONS GENERALLY CONSULTANTS

- NO PROCEDURES ON WASTE REDUCTION
  - Construction Waste Management Specifications not in Contract
  - Monitoring program NOT included in Contract - NO Standard Forms
  - NO Waste Monitoring report in Monthly Site reports
  - NO COST / BUDGET allocation
MISTAKES IN MR SUBMISSIONS GENERALLY CONTRACTORS

- **NO EXECUTION OF WASTE REDUCTION**
  - NO GOALS SET - Assess Potential & Select Materials
  - NOT INCLUDED INTO SUB-CONTRACTS
  - NO PLAN FOR WASTE REDUCTION
  - NOT COMMUNICATED TO SUB-CONTRACTORS & WORKERS
  - NO COST / BUDGET allocation in SUB-CONTRACTS
  - NO Waste Monitoring report in Monthly Site reports
DESIGN ASSESSMENT
DESIGN ASSESSMENT
MR1 : MATERIALS RE-USE

- OVERALL PROJECT MATERIALS COST NOT CLEARLY ESTABLISHED
- DIFFERENT TOTAL MATERIAL COST for different MR sections
- Inclusion of TIMBER FORMWORKS
- Over claim of Metal / System formworks cost
DESIGN ASSESSMENT
MR1 : MATERIALS RE-USE

Inclusion of the following which are NOT allowed:

- Hoarding Sheets
- Temporary Site cabins
- Sheet piles
- Wall Hangings
- Earth / Soil
DESIGN ASSESSMENT
MR1 : MATERIALS RE-USE

ALLOWED MATERIALS

DESIGN: LOT-EK
COMPLETION: September 2008
LOCATION: ports around the world
BLDG TYPE: retail, office + bar/event space
CLIENT: PUMA
SIZE: 11,000 sqft
DESIGN ASSESSMENT
MR2: RE-CYCLE CONTENT MATERIALS

- OVERALL PROJECT MATERIALS COST NOT CLEARLY ESTABLISHED
- The post and/or pre-consumer recycle content of the materials NOT submitted
- NOT CALCULATING the Recycle content correctly according to ISO 14021
- Recycled content value = post-consumer content value + ½ pre-consumer content value
- SUBMISSIONS WITHOUT CLEAR SUPPORT DOCUMENTS FROM MANUFACTURER / SUPPLIER
- Over claiming on the Re-cycle content on some materials such as GLASS & STEEL
- NOT Tracking and recording the Recycled materials supply and installation
DESIGN ASSESSMENT
MR2 : RE-CYCLE CONTENT MATERIALS

Supplementary Cementitious Material NOT Correctly calculated

It is allowed to calculate the recycled content value based on the mass of the cementitious materials only, rather than on the entire concrete mix.

For example, if 150 kg of coal fly ash is used per cubic meter of concrete, the fly ash would represent only a small fraction (5%) of the roughly 3,000 kg of materials in that concrete.

Eg:

<table>
<thead>
<tr>
<th>Mix #</th>
<th>Mass of Portland Cement (kg)</th>
<th>Mass of recycled SCM (kg)</th>
<th>Mass of total cementitious material (kg)</th>
<th>SCMs as a % of total cementitious material (kg)</th>
<th>$ value of all cementitious material</th>
<th>Recycled content value per meter [(SCM/2) x dollar value]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>200</td>
<td>50</td>
<td>250</td>
<td>20 %</td>
<td>$ 35</td>
<td>$ 3.50</td>
</tr>
<tr>
<td>2</td>
<td>300</td>
<td>100</td>
<td>400</td>
<td>25 %</td>
<td>$ 45</td>
<td>$ 5.63</td>
</tr>
</tbody>
</table>
DESIGN ASSESSMENT
MR2 : RE-CYCLE CONTENT MATERIALS

- INCORRECTLY CLAIMING THE FOLLOWING AS RECYCLED MATERIALS
- Earth / Soil
- Timber doors & Products
- Land fill materials
- Old Furniture
DESIGN ASSESSMENT
MR2 : RE-CYCLE CONTENT MATERIALS

USE MATERIALS
LISTED IN greenpages
DESIGN ASSESSMENT
MR3 : REGIONAL MATERIALS

- OVERALL PROJECT MATERIALS COST NOT CLEARLY ESTABLISHED

- Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within **Malaysia** of the project site for \( \geq 20\% \) (based on cost) of the total material value.

- Inclusion of Mechanical, electrical and plumbing components.

- Including materials NOT permanently installed in the project.
DESIGN ASSESSMENT
MR4 : SUSTAINABLE TIMBER
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ONLY MTCC & FSC CERTIFIED TIMBER IS ACCEPTED
DESIGN ASSESSMENT
MR4: SUSTAINABLE TIMBER

CALCULATION OF CERTIFIED TIMBER >50% NOT ADHERED TO THE FOLLOWING RULES

- In the case of an assembly, only the percentage certified wood can be applied toward the credit.
- The calculations for certified wood shall include only new wood products.
- The value of any recycled wood fiber content of a product that qualifies as contributing to Recycled Content Materials, shall be excluded.
- A list of items (and/or components of products) claimed as MTCC OR FSC certified, including product type, manufacturer, and the appropriate entity’s COC (Chain of Custody) certification number.
NOT ADHERING TO THE BASIC REQUIREMENT

- During Construction, provide dedicated area/s and storage for collection of non-hazardous materials for recycling, AND
- During Building Occupancy, provide permanent recycle bins.
DESIGN ASSESSMENT
MR5 : STORAGE & COLLECTION OF RECYCLABLES

DURING CONSTRUCTION

- NOT using the correct type of recycle bins
- NO separation of materials
- NO recycle bins for workers quarters domestic waste
DESIGN ASSESSMENT
MR5 : STORAGE & COLLECTION OF RECYCLABLES

DURING OCCUPANCY

► NOT using the correct type of recycle bins
► BIN CENTRE / RECYCLE CENTRE PLANS NOT SUBMITTED
► NOT ENOUGH RECYCLE BINS
DESIGN ASSESSMENT

MR6: CONSTRUCTION WASTE MANAGEMENT

- NO CLEAR PLAN OR NO GOALS ESTABLISHED OR SUBMITTED
- Construction Waste Management Specifications not in Contract
- Monitoring program NOT included in Contract - NO Standard Forms
CVA

COMPLETION & VERIFICATION ASSESSMENT
COMPLETION & VERIFICATION ASSESSMENT
MR1 : MATERIALS RE-USE

- FINAL PROJECT MATERIALS COST NOT CLEARLY ESTABLISHED
- DIFFERENT TOTAL MATERIAL COST for different MR sections
COMPLETION & VERIFICATION ASSESSMENT
MR2 : RE-CYCLE CONTENT MATERIALS

- FINAL PROJECT MATERIALS COST NOT CLEARLY ESTABLISHED
- NOT CALCULATING the Recycle content correctly according to ISO 14021
- Recycled content value = post-consumer content value + ½ pre-consumer content value
- SUBMISSIONS WITHOUT CLEAR SUPPORT DOCUMENTS FROM MANUFACTURER / SUPPLIER
- NOT Tracking and recording the Recycled materials supply and installation Resulting in no submission of PO & DO
COMPLETION & VERIFICATION ASSESSMENT
MR3: REGIONAL MATERIALS

- FINAL PROJECT MATERIALS COST NOT CLEARLY ESTABLISHED
- Inclusion of Mechanical, electrical and plumbing components.
- Including materials NOT permanently installed in the project.
Completion & Verification Assessment

MR4: Sustainable Timber

Calculation of certified timber >50% not adhered to the following rules:

- Final certified timber materials cost not clearly submitted
- COC (Chain of Custody) certification not up to date or not submitted at all
- No clear recordings of PO & DO during construction or in Monthly Site Reports
- Inclusion of recycled wood fiber content of a product
COMPLETION & VERIFICATION ASSESSMENT
MR5 : STORAGE & COLLECTION OF RECYCLABLES DURING CONSTRUCTION

- NOT monitoring the separation of recycled construction materials
- NO clear recordings during construction OR in Monthly Site Reports
COMPLETION & VERIFICATION ASSESSMENT
MR5 : STORAGE & COLLECTION OF RECYCLABLES

DURING OCCUPANCY

- NOT using the type number of recycle bins submitted at DA stage
- NOT ENOUGH RECYCLE BINS OR Recycle bins not ordered yet
- Recycle policy NOT established in building resulting in empty recycle bins
- Permanent Recycle Bin Centre NOT built
COMPLETION & VERIFICATION ASSESSMENT
MR6 : CONSTRUCTION WASTE MANAGEMENT

- NO CLEAR PLAN OR NO GOALS ESTABLISHED OR SUBMITTED
- Construction Waste Management Specifications not in Contract
- Monitoring program NOT included in Contract - NO Standard Forms
COMPLETION & VERIFICATION ASSESSMENT
MR6 : CONSTRUCTION WASTE MANAGEMENT

- WASTE MANAGEMENT PLAN NOT COMMUNICATED TO SUB-CONTRACTORS & WORKERS
- NOT INCLUDED INTO SUB-CONTRACTS
- NO PLAN FOR WASTE REDUCTION
- NO COST / BUDGET allocation in SUB-CONTRACTS
- NO Waste Monitoring report in Monthly Site report & NO clear recordings during construction

1) Calculate the percentage of construction waste (weight or volume).
2) Report with photographic evidence verified by PCP.
3) Evidence of received - PO / Letter of confirmation from principal recycler.
Question & Answer