Closing the loop of materials in the construction and demolition waste sector. Recycling yards and permits in Austria

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Österreichischer Baustoff-Recycling Verband
Austrian Construction Materials Recycling Association
Austria in Facts & Figures

Closing the loop of materials in the construction and demolition waste sector. Recycling yards and permits in Austria

Dipl.-Ing. Martin CAR
Austrian Construction Materials Recycling Association (BRV)
### Austria in general

<table>
<thead>
<tr>
<th></th>
<th><strong>Austria</strong></th>
<th><strong>Croatia</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Area total</td>
<td>83,883 km²</td>
<td>56,590 km²</td>
</tr>
<tr>
<td>Population</td>
<td>8,932,664 (2021)</td>
<td>4,034,529</td>
</tr>
<tr>
<td>Density</td>
<td>106/km² (2021)</td>
<td>72/km²</td>
</tr>
<tr>
<td>Gross Domestic Product</td>
<td>446 billion USD (2021)</td>
<td>68 billion USD</td>
</tr>
</tbody>
</table>

Building and civil engineering related figures:

<table>
<thead>
<tr>
<th></th>
<th><strong>Austria</strong></th>
<th><strong>Croatia</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies</td>
<td>9,005 (2021)</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>122,420 (2021)</td>
<td></td>
</tr>
<tr>
<td>Production Value</td>
<td>€ 26,3 billion € (2021)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 6.2 % of GDP</td>
<td></td>
</tr>
</tbody>
</table>
Development of C&D - Wastemanagement

1989: First law for waste management
1990: Voluntary agreement for the adduction of recycling materials
1990: Foundation of “Austrian Association for the Recycling of Building Materials”
1991: Publication of the first “Guideline For Recycled Building Materials”
1994: “Internet Information Platform RBB” goes online
2004: Guideline conform to CE
2009: New combined Guideline
2014: Austrian Standard B 3151 “Deconstruction”
2016: Recycled Construction Material Regulation – End of Waste
The aim of BRV

- BRV represents the recycling companies in the construction sector
- Creation of guidelines, leaflets and work aids as an implementation tool
- Conducting of conferences, training courses and seminars
European Quality Association for Recycling e.V. (EQAR)

The European Quality Association for Recycling e.V. (EQAR) is the European roof organization of national quality protection organizations and producers of quality-controlled recycled building materials from the EU member states.

In accordance with the Articles of the Association adopted by the founder members in the centre of the activities of the Association there are

• promotion of the international cooperation and
• exchange of experience between the national quality protection organizations and their members and
• know-how transfer and
• support in spreading the idea of quality protection and quality assurance of recycled building materials on European level.

To reach its aims EQAR in complete consensus with the Articles of the Association confesses to cooperate with further construction and building material recycling relevant international organizations.

It is open to national and international quality associations and enterprises producing quality products and their sponsoring members to become members of Association.

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Quality seal

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Recycling yards and permits in Austria

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Construction & Demolition Waste in Austria

Total quantity of waste: 71,261,900 t (2019)

Figure 9: Composition of the overall waste generated in 2015 according to waste groups

- Municipal waste from households and similar establishments
- Municipal sewage sludge and faecal sludge
- Construction and demolition waste
- Wood waste
- Ashes, slag from thermal waste treatment and from combustion plants
- Green waste, catering waste, street sweepings
- Excavated materials
- Other waste

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Recycling yards and permits in Austria
# Construction & Demolition Waste in Austria

## Table 34: Volume of construction and demolition waste

<table>
<thead>
<tr>
<th>Code numbers</th>
<th>Waste designation</th>
<th>Volume [t]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Mineral construction and demolition waste</strong></td>
<td></td>
</tr>
<tr>
<td>31409</td>
<td>Building debris (no site waste)</td>
<td>2,843,000</td>
</tr>
<tr>
<td>31409 18</td>
<td>Building debris (no site waste, only mixtures of selected waste from construction and demolition activities)</td>
<td>320,000</td>
</tr>
<tr>
<td>31410</td>
<td>Road rubble</td>
<td>705,000</td>
</tr>
<tr>
<td>31427</td>
<td>Concrete debris</td>
<td>2,767,000</td>
</tr>
<tr>
<td>31427 17</td>
<td>Concrete debris (only selected waste from construction and demolition activities)</td>
<td>646,000</td>
</tr>
<tr>
<td>31467</td>
<td>Track ballast(^1)</td>
<td>299,000</td>
</tr>
<tr>
<td>54912</td>
<td>Bitumen, asphalt</td>
<td>1,860,000</td>
</tr>
<tr>
<td></td>
<td><strong>Other mineral construction and demolition waste, non-hazardous</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>220,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9,658,000</td>
</tr>
<tr>
<td>91206</td>
<td>Site waste (no building debris)</td>
<td>339,000</td>
</tr>
</tbody>
</table>

**Total**

\(^1\) Track ballast stems from several public and private companies.

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[Logo]

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Construction & Demolition Waste in Austria

Figure 12: Recovery and disposal of waste, excluding excavated materials, in 2015 (basis: 26.99 million tonnes)
Recycling of Building Materials in Austria

- Mineral Construction Waste: 35%
- Concrete: 34%
- Asphalt: 27%
- Construction Waste: 4%

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Recycling of Construction Materials in Austria

Source: Projection of the BRV [recycled mass in tons]

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Recycling of Construction Waste in Austria

Recycling in Austria 2010 - 2021

Masonry

Asphalt

Concrete

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Austrian Construction Materials Recycling Association (BRV)
## Quality and use

<table>
<thead>
<tr>
<th>RB – Recycled crushed concrete granulate</th>
<th>RB – Recycled crushed concrete granulate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality construction material for unbound upper and lower base courses, agricultural road construction, aggregate for concrete production, high-quality trench filling material, drainage layers.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RH – Recycled sand or gravel from above-ground construction</th>
<th>RH – Recycled sand from above ground structures; recycled gravel from above ground structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality construction material for stabilised fills, stabilised trench fills, structural backfills, sports field construction</td>
<td></td>
</tr>
</tbody>
</table>

**Dipl.-Ing. Martin CAR**  
Austrian Construction Materials Recycling Association (BRV)
Mobile treatment of C&D-waste
Mobile Treatment Plants

Approval of mobile treatment plants

§ 52. (1) A mobile treatment plant referred to in an order under section 65 (3) or a substantial modification of such a mobile treatment plant shall be approved by the Authority.
(2) The application for approval of a mobile treatment plant shall be accompanied by the following documents in quadruplicate:
   1. Details of the nature, purpose and extent of the proposed treatment;
   2. Information on the types of waste to be treated and the treatment processes;
   3. General criteria for the installation sites;
   4. A description of the installation, including the necessary plans and sketches;
   5. A description of the waste to be expected from the operation of the treatment facility and the arrangements for its avoidance, recovery or disposal (waste management concept pursuant to § 10 para. 3);
   6. A description of the emissions to be expected and information on the avoidance or, if this is not possible, the reduction of emissions. For treatment facilities, the identification number of the treatment facility shall be indicated in the register.

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Stationary C&D-waste Treatment, situated in the heart of Vienna
Stationary Treatment Plants

Licensing and notification requirements for stationary treatment plants

§ 37. (1) The construction, operation and substantial modification of fixed treatment plants shall require the approval of the authority. The permit requirement shall also apply to a remediation plan pursuant to section 57(4).
(2) The following shall not be subject to the permit requirement pursuant to para. 1
1. Treatment facilities for the exclusive material recovery of non-hazardous waste, provided they are subject to the permit requirement pursuant to sections 74 et seq. of the Trade, Commerce and Industry Act 1994,
2. Treatment facilities for the pre-treatment (preparation for material recovery) of non-hazardous waste, provided that these treatment facilities are in direct local connection with a treatment facility referred to in No. 1 and are subject to the permit requirement pursuant to Sections 74 et seq. of the Trade, Commerce and Industry Act 1994,
3. Treatment plants for the exclusive material recovery of waste generated on the company's own premises, provided they are subject to the permit requirement pursuant to sections 74 ff GewO 1994

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Mobile and Stationary Recycling Plants in Austria

Baustoff-Recycling Anlagen 1995-2017

Anmerkung: Anlagen, die in BRV zusammengefasst sind.

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Law for reorganization of past pollution

A steering tax helps to make recycling more economic:

The deposition of waste is subject to the contribution for past pollution:

- Landfilling/depositing
- Interim storage longer than allowed (> 3 years)
- adaptations of site
- backfilling of surface irregularities
- burning of waste
- export
Law for reorganization of past pollution

The contribution has to be paid by:

- operator or owner of landfill
- exporter
- person responsible for action liable to contribution (employer or contractor)
- person who tolerates action liable to contribution (e.g. employer as landowner)
Law for reorganization of past pollution

Sets charge for actual desposal of construction waste

<table>
<thead>
<tr>
<th>Kind of waste site</th>
<th>From 1. Januar 2012 per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil excavation dump</td>
<td>Free for uncontaminated soil</td>
</tr>
<tr>
<td>Construction waste landfill</td>
<td>€ 9,20</td>
</tr>
<tr>
<td>Residual substance dump</td>
<td>€ 20,60</td>
</tr>
<tr>
<td>Mass refuse dump</td>
<td>€ 29,80</td>
</tr>
</tbody>
</table>

When does it occur?

- landfill ➔ YES
- illegal use ➔ YES
- quality building material recycling ➔ NO !!
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General Manager
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Thank you for your attention!