

# WASTAGE CONTROL

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BY RAJIV NEHRU

NEHRU INSTITUTE OF  
CONSTRUCTION AND ENTERPRISE

# DEFINITION OF WASTAGE

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- Construction material wastages can be defined as the difference between the value of materials delivered and accepted on site and those properly used as specified and accurately measured in the work.
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# WASTAGE AT CONSTRUCTION SITE

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ABOUT 5 – 10 PERCENT OF  
BUILDING MATERIALS END UP AS  
WASTE ON BUILDING SITES.

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# CASE STUDY

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- A field study was conducted on the following sites to study wastage, the sites were (bangalore):
    - 20 MLD STP – SPCL
    - 70 MLD STP – L&t
    - ADONIS (COMMERCIAL BUILDING) - JMC
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# RESULTS

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## □ GENERAL MATERIAL WASTAGE

▪ Figures in percent

Material	SPCL	L&T	JMC
Cement	3.65	2.2	2.5
Steel	3.165	3.42	2.02
Aggregate	3.45	2.62	1.2
Sand	2.5	2.15	3.8

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# GENERAL OBSERVATIONS

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- ❑ L&T was using a batching plant, with transit mixers and concrete pump.
  - ❑ JMC used RMC from a nearby birla plant.
  - ❑ SPCL were using mixers for concrete preparation.
  - ❑ JMC barbending was done at their central yard as per barbending schedule.
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# Other survey results

<u>Design Attributes</u>	<u>Points</u>
Design changes while construction	5
Inexperience of methods/sequence	4
Lack of attention to dimension	4
Lack of knowledge about std sizes	4
Lack of information in drawings	3
Complexity of detailing	4
Errors in contract documents	1
Incomplete contract document	2
Selection of low quality products	3

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Operational Attributes	Points
Damages to work done due to subsequent trades	5
Errors by tradesmen / labourers	4
Required qty. unclear due to improper planning	4
Delay in passing information to the contractor	3
Use of incorrect material thus requiring replacement	4
Accidents due to negligence	3
Malfunctioning of equipment	2
Inclement weather	3

<u>Material Handling Attributes</u>	<u>Points</u>
Inappropriate storage	4
Material supplied loose	5
Damages while transporting	4
Unfriendly attitudes of project team and labourers	3
Use of materials close to workplace	2
Theft	3

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<u>Procurement Attributes</u>	<u>Points</u>
Lack of possibility to order small quantity	4
Ordering errors (too much or too little)	3
Purchase not comply with specifications	3

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<u>Waste Preventing Attributes</u>	<u>Points</u>
Proper storage facility	5
Accountability system for sub contractors for extraordinary waste	4
Effective wastage accounting system	4
Selecting proper equipment and qualified operators	5
Having un updated plans / schedules	3
Employ material controller	3
Improve site security requirement	3

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# Best way to manage waste is to avoid in the first place.

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- Tools for wastage control
    - Material reconciliation.
    - Material Accounting.
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