Circular Lifecycle Planning Tools

This document provides tools and frameworks to help designers, architects, and builders plan plaster finishes with circular lifecycle thinking in mind.

1. Lifecycle Stages for Recycled Plaster

Stage	Key Considerations
Sourcing	Use local recycled plaster sources; avoid virgin gypsum where possible
Manufacturing	Incorporate natural binders and low-energy processing methods
Application	Apply multi-layer systems designed for durability and repair
Use Phase	Ensure low-VOC finishes, breathable walls, and repair-friendly surfaces
End-of-Life	Plan for dismantling, regrinding plaster, and reusing in future projects

2. Circular Planning Checklist

✓ Have you identified local sources of recycled plaster?

✓ Are natural, non-toxic binders and pigments specified?

✓ Does the design allow for repair, reuse, or easy dismantling?

✓ Have you calculated CO_2 and waste reduction metrics?

✓ Is there a plan for end-of-life material recovery?

3. Lifecycle Planning Matrix

Phase	Goal	Tool/Action
Design	Reduce waste at source	Material passports, specification sheets
Build	Minimize emissions	Low-energy mixes, local sourcing
Use	Enable repair and durability	Maintenance manuals, repair guides
End-of-Life	Close the loop	Recovery plan, recycling network partnerships

4. Key Tools & References

• Material Passports: ensure material traceability and reusability

• Lifecycle Assessment (LCA): evaluate CO_2 and energy impacts

• Circular Design Guide (Ellen MacArthur Foundation)

• Cradle to Cradle® certification framework

• Maintenance manuals for long-term performance