

## Advancing Resource Management at One Beacon Street (Boston, MA)

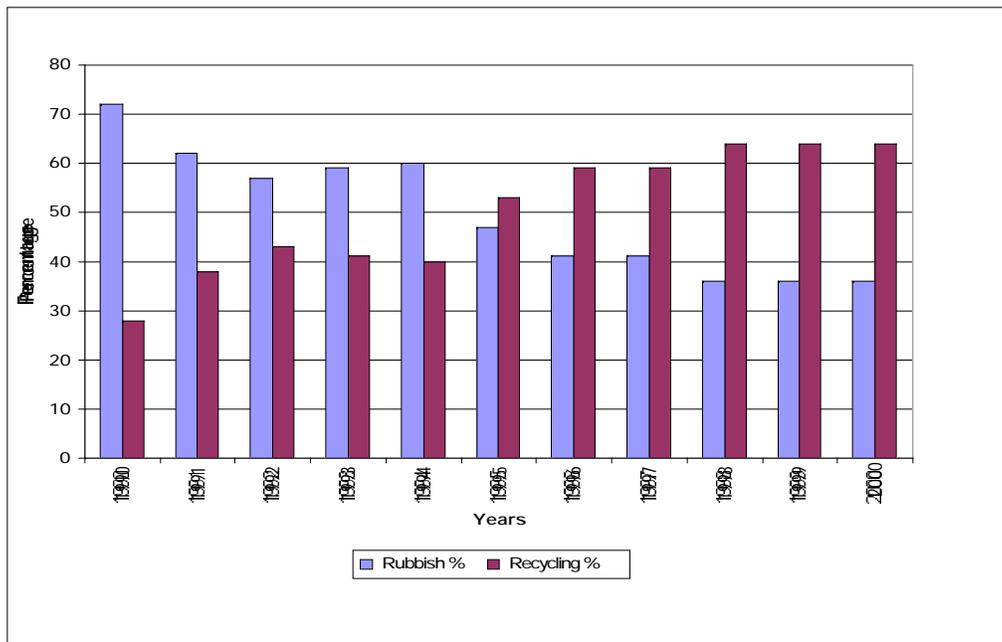
### 1. OVERVIEW

One Beacon Street is a high-rise office building in Boston with over 1.1 million square feet and a permanent population of 3,500. Tenants include a diverse mix of law firms, insurance companies, and investment houses. The building is managed by CB Richard Ellis (CBRE)<sup>1</sup>, a national full-service leasing and property management company whose services run the gamut from asset management, to research, consulting, and advisory roles. In its capacity as property manager at One Beacon, CBRE is responsible for executing all waste management and recycling operations for the property.

### 2. BASELINE SOLID WASTE AND RECYCLING SERVICES AND LEVELS

The One Beacon RM program focuses primarily on recycling of mixed paper. Over the past decade, CBRE has been at the forefront of resource efficiency and source reduction innovation, achieving improvement from a 28% recycle rate in 1990 to over 60% for the last two years. From 1995-2000, CBRE won 5 consecutive “Race to Recycle” Awards<sup>2</sup> for its efforts to reduce waste at the One Beacon buildings (Figure 1). CBRE’s success with resource efficiency is directly attributable to a comprehensive RM contracting and incentive program that it implemented in the early nineties.

Figure 1: Summary of One Beacon Recycling and Trash Service, 1990-2000



<sup>1</sup> Contact: Jim Fox, General Manager, (617-723-8616)

<sup>2</sup> An annual recycling competition organized by WasteCap, the Building Owners and Managers Association (BOMA) and MA DEP from July 1 through September 30.

Each tenant receives one recycling bin and one trash bin for each office space. New building tenants are shown an orientation video that includes an overview and documented success of the recycling program, and are asked for feedback on the recycling program. Tenants also receive regular updates and presentations on the progress of the recycling program. Two separate CBRE contractors are primarily responsible for providing waste and recycling services to building tenants, including a custodial contractor and a waste/recycling contractor.

CBRE's custodial contractor transports trash and recyclables from tenant offices and workspaces to loading dock compactors. At the freight elevator, custodians log the number of bags for recycling and trash collected from each floor. Once at the loading dock, trash and recyclables are hauled by a second CBRE waste/recycling contractor on an "on-call" basis that is initiated by custodial staff.

CBRE's waste/recycling contractor provides all required recycling and trash containers, including desk-side waste and 28 quart recycling bins for all tenants, 96 gallon recycling barrels, newspaper/magazine bins, and hampers for corrugated cardboard at key locations (i.e., copy stations, near elevators). This contractor is also responsible for internal marketing of recycling/material handling programs and education in collaboration with CBRE and the custodial contractor. This involves educating tenants and the custodial contractor regarding recycling protocols and performance auditing procedures. More specific activities include the design of an educational recycling poster and video, developing and disseminating recycling performance updates in the workplace, and conducting a daily monitoring program in which custodial staff place memos on tenants desks informing them of their recycling progress, or of any contaminants or breach of recycling protocols. In general, the hauling/recycling contractor supplies all required recycling and disposal infrastructure as determined by regular facility audits conducted by the contractor.

### **3. BASELINE CONTRACTS, COMPENSATION, AND INCENTIVES**

Each of the major stakeholders in the One Beacon RM program, including CBRE, One Beacon tenants, and CBRE contractors receive direct incentives to recycle. By providing RM services to its clients, CBRE adds value to its property management services at little to no cost, providing one aspect in which to differentiate itself from its competitors. Value in this case is derived from reducing building operating costs, reducing congestion at the loading dock by using consolidated services, and addressing tenant environmental concerns. For CBRE, value is determined by income capitalization calculation method to determine its net operating income (NOI).<sup>3</sup> Traditional waste removal cost can run up to \$0.12 per square foot (PSF) for an office building. CBRE's RM program at One Beacon has reduced waste management costs by 60%, adding \$0.048 to NOI. For a 1 million square foot office building such as One Beacon, this represents \$48,000 in NOI or \$564,750 in added value when capitalized at 8.5%.

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<sup>3</sup> NOI is most often compared to debt service costs to calculate the debt coverage ratio (DCR), which measures the ability to meet the mortgage payments from the NOI. The DCR is usually required to be greater than 1.0, and is calculated by dividing the NOI by the annual debt service costs.

To motivate active participation by building tenants, CBRE provides an annual appreciation breakfast for tenants who recycle the highest percentage of waste. CBRE also makes recycling simple and straightforward for tenants and provides active feedback on tenant recycling progress.

With the advent of the RM program, CBRE worked closely with its custodial and waste/recycling contractors to ensure that there would be virtually no incremental custodial cost for collection of recyclable paper. This resulted in the development of the two-bucket system and a two-compartment cart for janitors (i.e., clear for paper recyclables, black for trash). CBRE also provides a variety of direct incentives to its custodial contractors to enhance recycling performance, including: personalized thank you letters and Thanksgiving turkeys to 90-odd janitorial staff for their pivotal role in the system, contests involving small (\$100) cash rewards to janitorial staff who divert the highest volume of materials, and a \$1,000 bonus to the custodial staff manager if CBRE wins the "Race-to-Recycle" Reward. As with the tenant appreciation breakfast, these financial incentives are funded with savings realized through the RM program.

CBRE and its waste/recycling contractor split all revenue from recyclable materials evenly when the grade listing exceeds \$120/ton on Yellow Sheet/Official Board Markets New England Region rates. For example, if the Yellow Sheet listing were to reach \$180 per ton, \$60 per ton is split 50/50 between both parties. The \$120/ton fee effectively represents the waste/recycling contractors handling, processing, and brokerage fee.

CBRE has effectively "capped" the compensation it provides for waste hauling and disposal service by changing from a regularly schedule garbage hauling service to an on call service that is initiated by its custodial contractor on an as needed basis. Moreover, removing paper from the waste stream has resulted in compactor loads that are approximately 28% more dense, further optimizing hauling costs. This, combined with completely transparent pricing (per haul, tip, recycling gain-share and container rental) allows savings to flow back to CBRE. Within 6 months of establishing the on-call arrangement, waste service levels were reduced from 5 pick-ups per week to 1 pick-up per week. After a year at this level, the program saved CBRE \$21,000 on hauling and tipping fees. This is used to leverage further improvements in diversion by providing incentives to contractors or financing other internal projects.

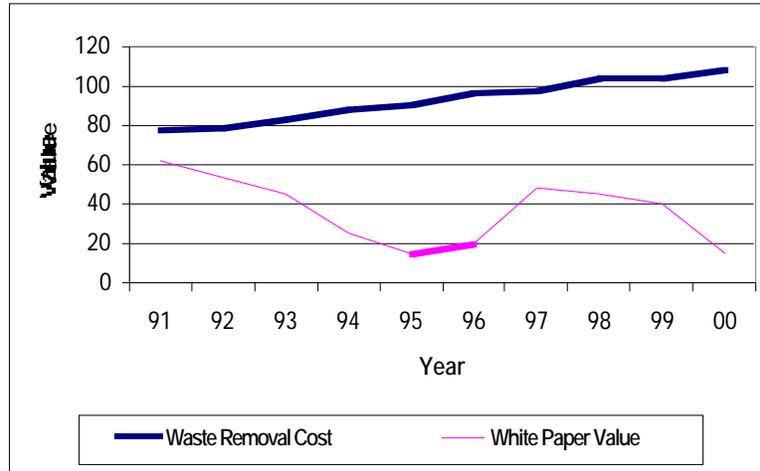
#### **4. RESOURCE MANAGEMENT IN ACTION: THE CBRE APPROACH**

CBRE's RM approach consists of five key elements: team building, cost avoidance, simplicity, communication, and performance evaluation. The first of these components, team building, involves creating rapport and structure for shared responsibility between the property manager (CBRE), tenants, custodians, and the waste/recycling contractor. This is accomplished by establishing common resource efficiency goals, and sharing in the associated rewards and incentives as described in the previous section.

The next component of this CBRE RM approach focuses on cost avoidance and service improvements as well as recycled commodity revenues. Because prices for recycled commodities fluctuate rapidly with the market, there is a high level of risk involved in

basing compensation solely on volatile commodity revenues (Figure 2). CBRE shares this risk with its waste/recycling contractor by guaranteeing a fixed price (\$120/ton) for current service levels and then splitting revenue above this amount with the contractor. In addition, CBRE uses avoided disposal savings to finance tenant and custodial incentives described in the previous section. Focusing on cost avoidance in recycling rather than income generation, CBRE can justify targeting the broader 65% of its paper stream, rather than only “high value” fiber commodity streams.

Figure 2: Value of One Beacon Disposal Cost Avoidance vs. Recycled Commodity Revenue



Simplicity is another characteristic of One Beacon’s RM approach. In its “two-bucket system”, tenants have one recycling bin for all paper types and one trash bin for everything else. Additionally, as noted previously, when the program was implemented, custodians received carts to make the job of collecting both garbage and recyclables easier for the custodians.

Communication is the thread that binds all of CBRE RM program elements together. For team building, communication is essential to establish aligned interest, and work towards common causes. Not only does communication take the form of expressed commonalities, differences, and progress towards goals, but it also takes the form of compensation mechanisms, which communicate the ultimate desires of the customer. Communication is also germane to performance evaluation, in which monthly waste and recycling levels, participation rates, and other metrics are used to assess progress towards established targets.

## 5. RM CONTRACTING PRACTICES AND OPPORTUNITIES AT ONE BEACON

Six general RM contracting practices are identified in Table 1. These are based on findings from this and other ongoing RM projects and provide a basis for assessing RM practices and opportunities at a diverse range of case study organizations. The third

column of Table 1 indicates that all six RM contracting practices have been implemented by CBRE at One Beacon. Additional details on RM practices and opportunities at One Beacon are provided following the table.

Table 1: Summary of Standard RM Practices

RM PRACTICE	DESCRIPTION	PRESENT
1. Establish Baseline Cost, Performance and Service Levels	Define scope and service levels Identify existing contract and compensation methods Establish cost and performance benchmarks and goals	X
2. Seek Strategic Input from Contractors	Convene pre-bid meetings with contractors to articulate goals and address questions Allow or require bidders to submit operations plans for achieving specified improvements in existing operations	X
3. Align Waste and Resource Efficiency Services	Coordinate, integrate, and formalize all contracts and services included in the baseline scope identified in Practice 1 Ensure that contractor has access to "internal" stakeholders that influence waste management and generation	X
4. Establish Transparent Pricing for Services	Delineate pricing information for specific services such as container maintenance, container rental, hauling, disposal, etc. Allow variable price savings, such as "avoided hauling and disposal" to flow back to generator and/or be used as means for financing performance bonuses.	X
5. Cap Compensation for Garbage Service	Constrain waste hauling/disposal service compensation by capping or changing to "on-call service." De-couple contractor profitability from waste generation and/or service levels. Based initially on reasonable estimates of current hauling and disposal service and costs as per practice 1.	X
6. Provide Direct Financial Incentives for Resource Efficiency	Establish compensation that allows contractor to realize financial benefits for service improvements and innovations. Assess liquidated damages for failing to achieve minimum performance benchmarks or standards.	X

1. *Establish Baseline Cost, Performance, and Service Levels.* CBRE has tracked detailed cost, performance, and service information since 1990. This has allowed CBRE to establish equitable compensation and gain-sharing arrangements, as well as service and performance benchmarks that have resulted in a model recycling operation.
2. *Seek strategic input from prospective contractors.* In developing a RM program for One Beacon, CBRE has gone beyond seeking input from prospective contractors to solicit interest, feedback, and participation of all stakeholders. Team building and communication are two cornerstones of the CBRE RM approach. Team building seeks buy-in towards achieving a collective goal of high diversion, while communication passes information between parties to judge collective progress and solicit input on for effective means to achieve program objectives. CBRE benefits from collaboration with prospective contractors in the RFP phase and throughout the

term of its RM contracts by extending responsibility to a larger realm of activities. For example, the bidders on the current One Beacon contract submitted operations plans for maintaining and achieving specified improvements to the current program, in the process guaranteeing a minimum of 55% recycling rate.

3. *Align garbage, reduction and recycling services.* As a full service property management company CBRE has been in an ideal position to influence tenant interest and participation in recycling, while also leveraging and coordinating the expertise of its custodial service contractor and a waste and recycling contractor.
4. *Establish transparent pricing for services.* CBRE has benefited from having contractors “unbundle” pricing structures to specify hauling and disposal on a variable basis (i.e., \$ per haul, \$ per ton tipped). This allows CBRE to economize on hauling and disposal costs from increasing diversion, and to more easily assess and negotiate savings on the volume of materials disposed in future contracts. All other recycling equipment costs, and recycling hauling and revenue is clearly stated upfront, and represents a balance of shared risk and shared gain as commodity markets fluctuate. Savings from these two sources (i.e., avoided disposal cost, commodity revenue) are used to finance performance bonuses (described in practice 6).
5. *Cap Compensation for Disposal Service.* CBRE has effectively “capped” the waste hauling and disposal compensation by substituting an on-call, as-needed service for what in typical situations is an inefficient periodic service schedule regardless of whether the given container capacity has been filled.
6. *Provide Direct Financial Incentives for Resource Efficiency.* CBRE provides direct incentives to all stakeholders to support a cohesive RM program in which all are willing participants. Eventually, the limits of recycling opportunities will be reached, and continued viability of the RM model will rely on devising compensation mechanisms that incentivize new source reduction and/or diversion innovations (i.e., composting). The same basic principles and approach that CBRE has applied to its mixed paper recycling effort will apply resulting in a further change in the contractor-client relationship, and a new focus.