

# Egbert Taylor

## Hartlepool BB Review



Information taken from Clean  
Date coverage 01/01/19 to 26/08/19

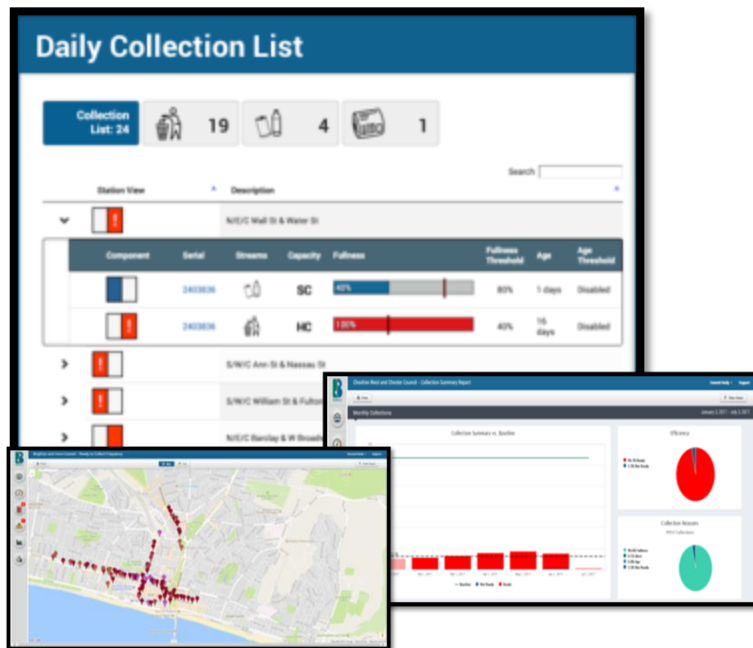


# Cloud Connected Smart Waste Platform



## CLEAN Management Console is the cornerstone of the Bigbelly Smart Waste & Recycling System

- **Web-based software** enables system setup, management, monitoring, and optimization
- **Centralized dashboard** with real-time collection requirements and metrics
- **Auto-generated notifications** trigger collections exactly when needed
- **Suite of reports** enable users to prioritize collections & optimize ongoing operations



# 34 HC5 Stations – down from 54

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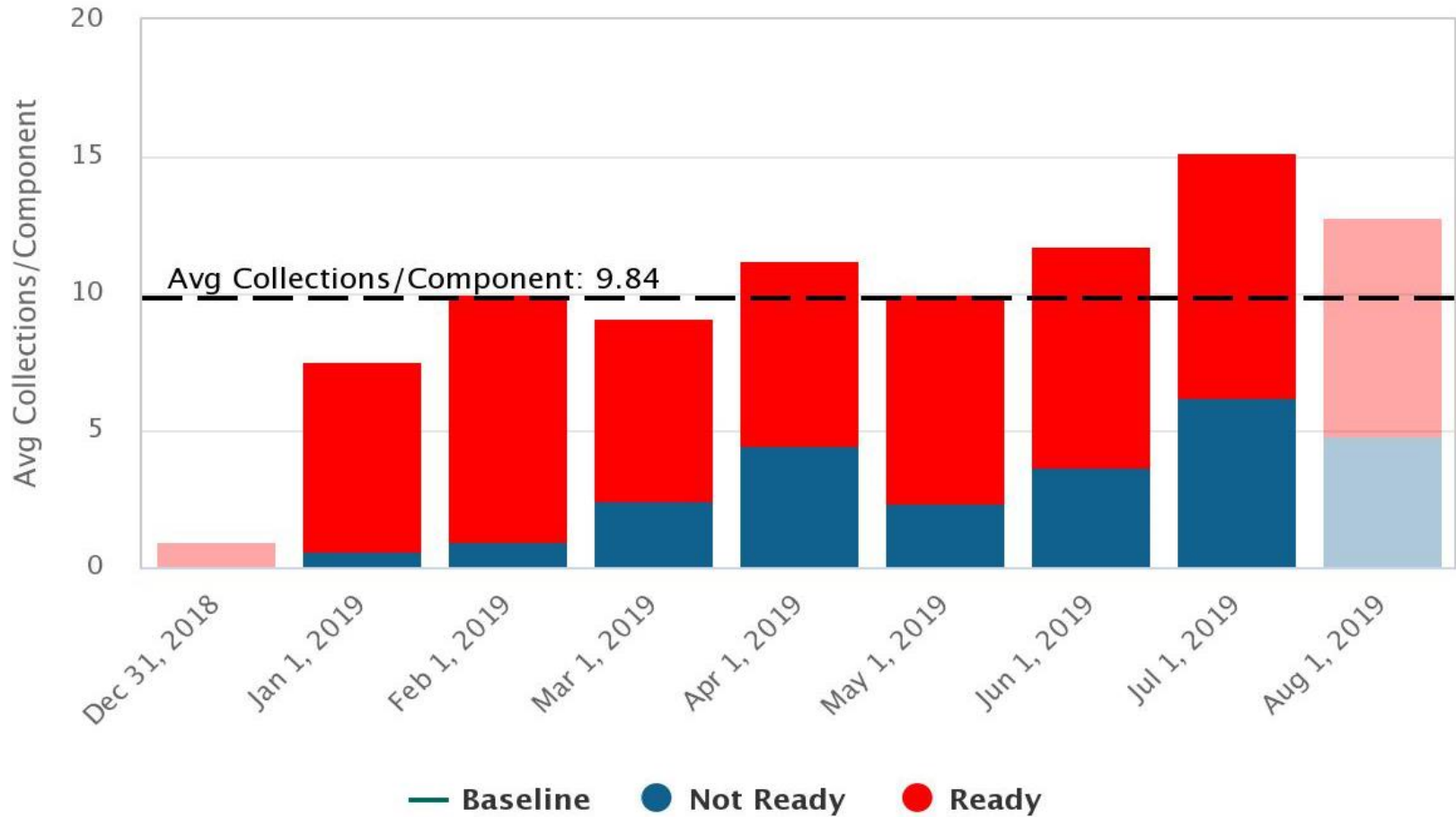
# Headlines to date

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- Total Number of Litres collected – 983,317
- Ready collections total – 1,952
- Not ready Total Collections - 856
- Total HC5 Collections – 2,808
- Collection Efficiency % - 68%
- Previous collections over 238 days – 11,383
- Reduction since HC5 introduced– 8,575 – 75% reduction
- Hours saved per collection (3mins) – 429

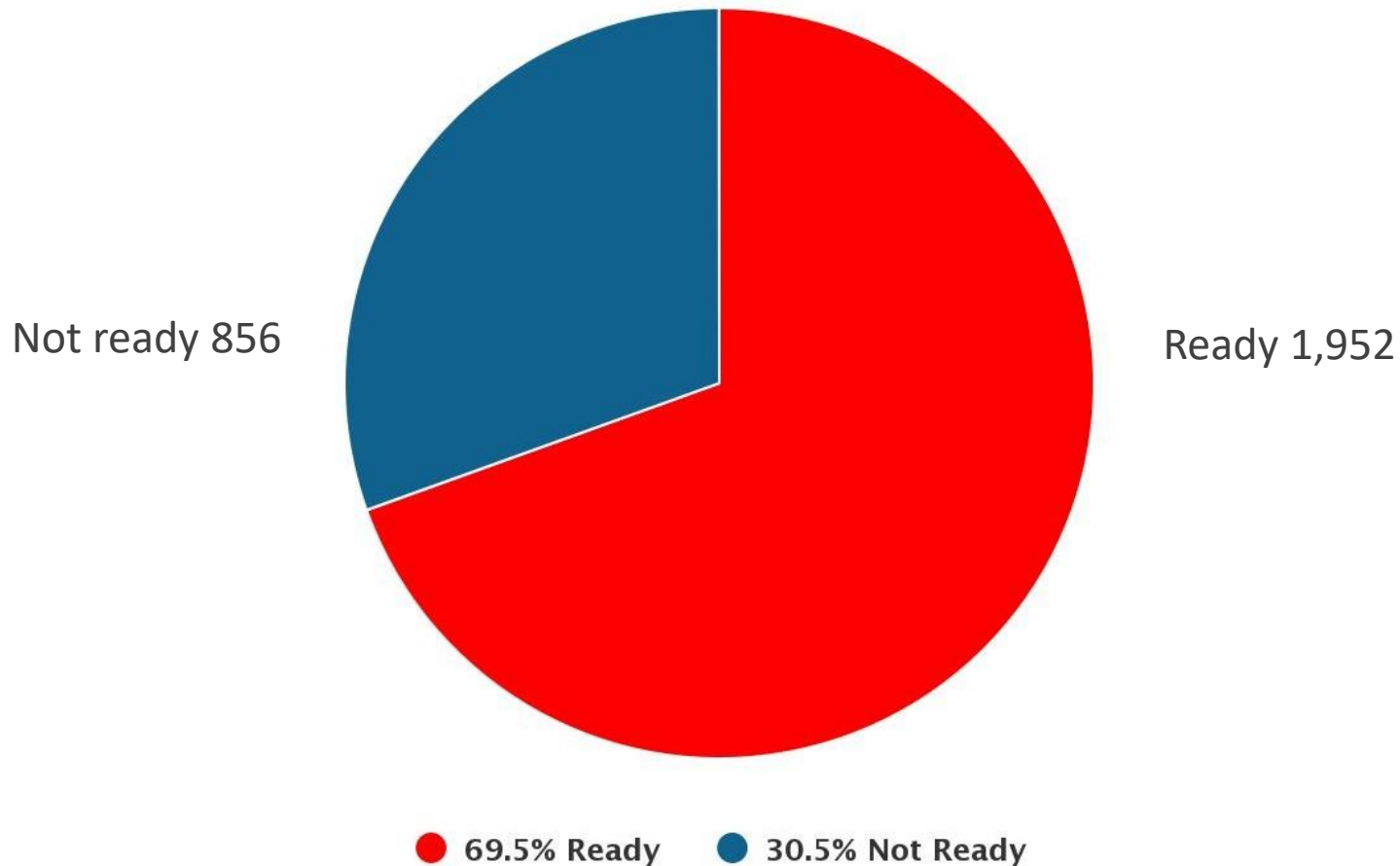


# Collection Summary (No Baseline) (01/01/19 – 26/08/19)

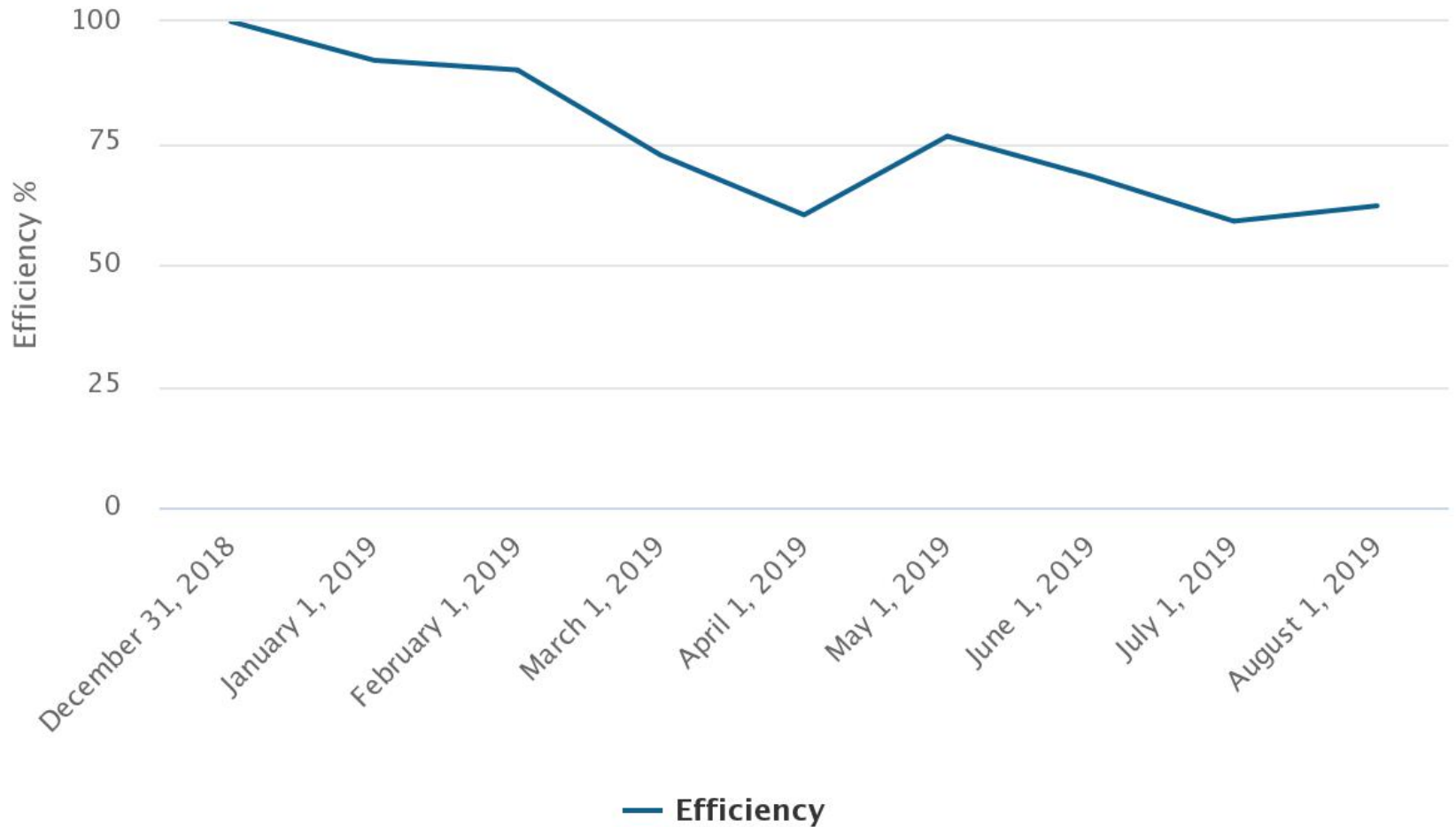


# Collection Efficiency (01/01/19 – 26/08/19 – 238 days)

Not Ready	Fullness	Total	Previous Bins	Reduced Empties	% Less
856	1,952	2,808	11,383	8,575	75%



# Collection Efficiency (01/01/19 – 26/08/19)



# Collection Breakdown & Days to collect

Reason	Fullness Level at Collection	Qty
Not Ready	0%	366
Not Ready	20%	127
Not Ready	40%	217
Not Ready	60%	146
Fullness	60%	117
Fullness	80%	1,320
Fullness	100%	405
Alert	Alert - Unknown Fullness	99
		2,797

Description	Avg. Days to Full
Car park behind Almighty Cod	17.0 hours
Railings at bus stop	18.0 hours
Front of carpark Pay machine	17.0 hours
Sea Front Car park by toilets	21.0 hours

Description	Avg. Days to Full
King Oswy Street	11.1 days
Corner Of Kilmarnock Road	13.2 days
Church St, Adult Services	14.6 days
Church Square, Bus Station Carpark Entrance	15.0 days
Wynyard Road	19.8 days
Laird Road	24.8 days
Owton Manor Lane Bus Stop	32.3 days



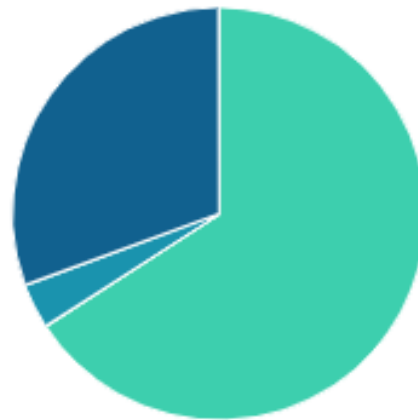


# Collection Response

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Reason for Collection	Component Count	Average Age at Collection
Fullness	1842	12.1 hours
Age	0	-
Alert	99	3.8 hours
Not Ready	856	18.0 hours

- 65% Fullness
- 0% Age
- 3% Alert
- 30% Not Ready



# Location report breakdown

Busiest Locations					
Description	Liters	Total Collections	Ready Collection	Not Ready Collections	% Efficiency
Car park behind Almighty Cod	93,348	314	156	158	50%
Railings at bus stop	91,871	193	168	25	87%
Front of carpark Pay machine	90,168	213	171	42	80%
Sea Front Car park by toilets	78,244	178	138	40	78%
Seating area behind bus station	63,254	158	129	29	82%
Quiet Locations					
Description	Liters	Total Collections	Ready Collection	Not Ready Collections	% Efficiency
Church Square, Bus Station Carpark Entrance	3,293	14	7	7	50%
King Oswy Street	2,725	15	5	10	33%
Laird Road	2,611	7	6	1	86%
Wynyard Road	2,271	9	6	3	67%
Owton Manor Lane Bus Stop	1,589	5	4	1	80%

# What's new - Hardware

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- **Hopper sensor**
  - captures data for hopper jams, opening counts, etc. and logs it in CLEAN
- **Foot pedal**
  - same look but more robust push rod design, easier to service
- **HC Side Skins: Easy clean sides for graffiti**
  - Texture will change slightly to allow for easy cleaning
  - White graphics are eliminated to prevent streaking
  - Graffiti abatement guidelines/document – best practices for cleaning and painting over
- **Battery life extension**
  - Continuing our focus on extending the life of the HC battery (6-8 year)
  - New solar charger for better charge control

# What's New - Software Update

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- **CLEAN API**

- What data is available? Station locations, fullness info, collection summary stats
- How is it accessed? Get API token from CLEAN, request desired data from our servers
- Customer would have in-house programmer or 3rd party software (Tableau, etc.) use the data

- **Service Tool**

- Installation: Scan serial #, add description, put in group, select waste stream, adjust GPS
- Service: Scan serial #, take pictures, report issues, report maintenance, enter inspection info

- **Predictive Fullness (Coming soon)**

- Will give customers the ability to plan out a collection schedule based on historical data and collection frequency trends in CLEAN

# Feedback

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- Operatives & Team feedback?
- Public feedback?
- Are you happy with all the current locations?
- Is everyone receiving alerts and notifications?
- Does anyone need additional training?
- Information required to set up groups
- Maintenance reports
- Are you happy with the system and service you are receiving?