



BRADGATE BAKERY

EPR/CP3430WV

4 YEARLY

RESOURCE EFFICIENCY REVIEW

JANUARY 2024

RESOURCE EFFICIENCY SUMMARY

ENERGY

Well monitored and controlled

PV panels producing around 130,000 kWh annually

Recent ESOS reports completed with action plans in place to address opportunities - 2024 Voltage optimisation project with potential 967,000 kWh's saving identified:

Waste heat recovery appears to provide significant savings however, investment is high with long payback periods. Further investigation is required.

Other projects (LED lighting, Air leak Management, Steam trap management) have potential 348,000 kWh savings

Recycling tray wash rinse water savings (474,000 kWh) to be further investigated.

RAW MATERIALS

Most of components dictated by customers which reduces potential for alternatives

Potential still exists to reduce environmental impact through choice of supplier

Continue with waste reduction plan to reduce raw material use

Further investigate water saving opportunities from recycling of tray wash rinse water and pasta chilled water

look at fitting water saving spray nozzles for wash downs

Continue with packaging reduction plans and identify environmental savings (kg reduction in material used)

removal of printed label and replacing with print onto outer could have significant positive impact

Replacement / Reduction of Plastic Stretch Wrap - (Paper, Pattern)

WASTE

Waste is well controlled and effectively managed. Currently no waste goes to landfill or carries a D code.

All waste streams segregated at source and recovered/ recycled to avoid landfill, however opportunities to improve removal of recyclables from general waste to reduce RDF should be investigated.

Continue with CAT 3 waste reduction plans

Continue with all current waste treatment routes

Follow up bread crust to crumb opportunities

ENERGY

ENERGY TYPE / ACTIVITY	SOURCE	MONITORING METHODS	CURRENT CONTROLS / OPPORTUNITY STUDIES	TARGETS 2023	ACTUAL 2023	OPPORTUNITIES TO IMPROVE ENERGY EFFICIENCY OF ACTIVITY?	POTENTIAL SAVING (kWH)	IN PLAN?	OWNER
ELECTRICITY	Grid	Carbon Desktop software via Sub metering Daily reports sent to sites by CD	100% renewable energy purchase						
			Sub metering installed and extended	MR kWH 9,915,981 MR kWH/te	MR kWH 10,116,407 MR kWH/te	Voltage Optimisation Project expected to deliver savings of 4.9% at AG & 5.6% at MR	967,000	Yes Apr-24	Radu Potirniche
			Weekly usage reported to group Max Usage Targets set	326	305	Continue with LED replacement lighting	54,000	YES	Dave Letts Narinder Singh
			ESOS studies completed each site in 2023	AG kWH 8,910,148 AG kWH/te	AG kWH 9,230,968 AG kWH/te	Investigate possibility of reducing height of coolers in AG distribution	TBE	?	
			Photovoltaic panels installed on Ashton Green roof to generate electricity	435	484 AG feed in 130,000 kWH	Compressed air leak management	147,000	?	
			LED lighting installed						
			IR sensors on lighting in some areas						
			PV panels on some chiller units						
GAS	Mains	Carbon Desktop software via Sub metering Daily reports sent to sites by CD		MR KWH 9,429,420 MR KWH/te	MR KWH 9,033,698 MR KWH/te	Fit waste heat recovery to air compressors and use to heat medium temp hot water (investigation required)	670,000	?	?
			Weekly usage reported to group Max Usage Targets set	304	273	Fit waste heat recovery to refrigeration compressors and use to balance demand (AG) (Investigation required)	4,600,000	?	?
			ESOS studies completed each site in 2023	AG KWH 4,895,644 AG KWH/te	AG KWH 5,793,093 AG KWH/te	Replace MR boiler with steam generator (study required)	TBE	No	Dave Letts
			(Note- absolute usage affected by product mix e.g. pasta cooking, baking baguettes)	239	304	Steam Trap management (AG)	37,000	?	N. Singh
						Steam Trap management (MR)	110,000	?	Dave Letts
						Steam Boiler economiser	264,000	Yes?	?
						Maximise heat recovery from Ammonia plant compressors (MR)	5,500,00	Yes Jan 2025	Steven Kavanagh
						Investigation required			
						Investigate replacing restaurant kitchen deep fat fryers with air fryers	TBE	Yes	
						Recycle traywash rinse water to pre wash (to be investigated)	474,000	No	

WASTE

WASTE TYPE	SOURCE(S)	CURRENT CONTROL & MONITORING MEASURES	WASTE TREATMENT ROUTE	R/D CODE	ANNUAL TONNES	FURTHER APPROPRIATE MEASURES REQUIRED OR CONTINUE WITH EXISTING ?	IN PLAN?	RESPONSIBILITY/ OWNER(S)
CAT 3 Food Waste	Process areas (off cuts, floor waste, M/C & tray wash), Quality checks, Out of code components, Cold call, Over production, Last minute order changes	MUV tracked for all components	Material sent to AD as fuel for energy generation - Recycled via PH Hull	R3	1638	Continue with CAT 3 Waste group activities & employee awareness program	YES	Senior Production Managers, Planning & Stock control, Hygiene Managers
		MUV targets set in production accounts with weekly reporting				Ongoing work to sell overs to C/S or distribute short life components to fareshare / community pantries		
		Weekly CAT3 reduction group meetings with action plans in place						
		Plant design to reduce spillage Product sent to CS/Restaurant/ Fareshare where possible Weekly reporting from PH Hull						
General Waste	Waste bins in offices, Restaurants & W/shops, Contaminated wrappings from components	Weekly reporting from PH Hull	Incinerated as Waste to Energy - Recovered via PH Hull	R1	1904	Continue focus on segregation to remove recyclables from General Waste	YES	Hygiene, Environment Adviser
		Employee awareness comms to segregate waste correctly allowing better recycling potential.						
		Segregated bins for Paper, Plastic Bottles, Tins & Cans Segregation in departments						
Metals	Some ingredients supplied in tins, Scrap Metal from maintenance & plant improvements	Ingredients tins segregated from packaging waste and recycled via PH Hull	Recycled via PH Hull	R4	242	Continue current measures	YES	Hygiene Managers
		Scrap Metal collected via PH Hull						
		Segregated bins for tin cans						
		Weekly reporting from PH Hull						

WASTE

Waste Type	Source(s)	Current Control & Monitoring Measures	Waste Treatment Route	R/D Code	Annual Tonnes	Further Appropriate Measures Required or Continue with Existing ?	In Plan?	Responsibility/Owner(s)
Wood	Incoming Goods (pallets & Layer boards)	Most outgoing goods despatched on rental pallets	Re-Used /Reclaimed via PH Hull	R5	942	Continue current measures	Yes	SBSC, Hygiene Managers
	Outgoing Finished Goods	Broken pallets collected by PH Hull						
		Good non rental pallets collected by PH Hull						
	New machinery crates	Weekly report from PH Hull						
Plastic	Incoming goods packaging	Plastics from ingredients supply segregated at source as used	Recycled via PH Hull	R5	680	Continue current measures	Yes	Hygiene Managers, Planning & Stock Control, Production Managers
	Redundant Packaging	Planning of delisted items to ensure minimal surplus						
		Segregation of plastics from general waste at source, separate bins						
	Occasional EOL Equipment	Plastics collected by PH Hull Weekly report from PH Hull						
Cardboard & Paper	Incoming goods packaging	Incoming goods cardboard segregated at source as used	Recycled via PH Hull	R3	903	Provide bins for clean cardboard in Restaurants	Yes	Hygiene Managers, Planning & Stock Control, Departmental Managers, Environmental Adviser
	Redundant Packaging	Planning of delisted items to ensure minimal surplus						
	Confidential Paperwork	Mostly baled and collected by PH Hull						
	Cores from labels & film	Bins for office paper and card Confidential collected by PH Hull						
	Restaurant	Cores collected by PH Hull Restaurant card included in GW Weekly report from PH Hull						

WASTE

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WEEE	Redundant Equipment	Collected by PH Hull Weekly report from PH Hull	Recycled via PH Hull	R13	4	Continue current measures	YES	Hygiene Managers
Other Small Wastes (oils, Interceptor waste, Chemicals, IBC's, Toner cartridges, PPE & workwear)	Compressor maintenance	Removed by service agents under HWCN	Recovered by service agent	R09	23	Continue current measures	YES	Hygiene Managers
	One off events	Collected by PH Hull - HWCN	Recycled via PH Hull	R13				
	Office Printers		Recycled via PH Hull	R03				
	EOL equipment	Collected by PH Hull	Recycled via PH Hull	R13 R05				
Bread (clean)	Crusts from sandwich bread	Collected by PH Hull Used as animal feed	Re-used via PH Hull	N/A	2000	Investigate loaf supply without crust ends	No	Procurement
	OOS bread from suppliers	Weekly report from PH Hull				Investigate processing into useable crumb	Yes	Ops