

FAIRER
WESTMINSTER



City of Westminster



PDHU- Some history

- 1946 - Feasibility study carried out recommending using waste heat from the London Power Co, which operated at Battersea Power Station. Advantage of this would be a consequent reduction in atmospheric pollution, in addition to greater thermal efficiency by using District Heating compared to conventional heating.
- The Pimlico District Heating Undertaking (PDHU) is a district heating system which currently supplies: 3306 residential properties and more than 50 commercial properties ranging from schools, offices, libraries, shops etc.
- The PDHU is supplied with heat from an Energy Centre which is located at the Pump House on Churchill Gardens Estate.
- London's oldest and currently biggest heating network.





PDHU- Some history

- 1972 – Lillington Gardens development completed. Heat provided from an on-site oil fired boiler house with a total heat output of 7.25MW.
- 1982 - Feasibility study recommends connection of Lillington & Longmore Gardens to PDHU.
- 1983 - Lillington & Longmore Gardens connected to PDHU.
- The Energy Centre has 3 gas fired hot water boilers each rated at 8MW, together with 2 No. gas fired combined heat & power (CHP) engines



PDHU- Some history

LILLINGTON GARDENS

- Lillington Gardens, Longmoore Gardens, Tachbrook Triangle & Wolfson House are supplied with heat by a 200mm pre-insulated feeder main which goes from the Pump House passing up Charlwood Street and enters Lillington Gardens Boiler house beneath Morgan House. This pre-insulated flow and return pipe was installed in 1983.
- The part of the system was designed and installed in such a way that it essential that heat is always kept flowing through it. This is achieved by the installation of a motorised bypass valve arrangement, whereby when the heat to Lillington Gardens is switched off at night the valve on the flow into the estate closes but a full-bore bypass valve opens.



PDHU- in flat system designs

LONGMOORE GARDENS

- The heat supply to Longmoore Gardens branches off from the Lillington Gardens feeder main within Phase 1 Car Park. Unlike the majority of PDHU, Longmoore Gardens is hydraulically separated from the remainder of the PDHU primary network by a plate heat exchanger and a pressurisation unit.
- This design is used to pressurise secondary side of the plate heat exchanger and with it the Longmoore Gardens main distribution network. Heat to Longmoore Gardens is distributed by a pre-insulated pipe network.
- Throughout the network there are local block isolation valves on each branch to the buildings. These valves are located in valve pits within the footpath and gardens of Longmoore Gardens.

PDHU-In flat system designs



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LILLINGTON GARDENS ESTATE HEATING

- Each flat within Lillington Gardens has a wall mounted thermostat which controls either a 2-port or a 3-port diverting valve. When the room temperature is satisfied the three-port valve moves to a diverting position and sends the flow water back into the heating return, radiators are fitted with TRV's.

LONGMOORE GARDENS ESTATE HEATING

- Each flat within Longmoore Gardens has a common pipe connection which divides to supply heating and domestic hot water primaries. The heating circuit is piped as a single pipe system with each radiator being fitted with a twin entry radiator valve with a built-in bypass. Each of these radiator valves are fitted with a thermostatic head which controls the temperature within each room

PDHU-Lillington & Longmoore Gardens



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LILLINGTON GARDENS	BEDSITTER	1 BEDROOM	2 BEDROOM	3 BEDROOM	4 BEDROOM	TOTAL FLATS
Charlwood	28	21	0	0	0	49
Exbury	0	0	0	8	0	8
Fairchild	6	0	0	0	6	12
Forsyth	0	0	1	51	8	60
Goodyer	7	0	0	0	7	14
Henry Wise	36	35	25	0	0	96
Longleat	25	40	19	11	8	103
Morgan	23	12	10	4	0	49
Parkinson	88	11	0	0	0	99
Priory	7	5	0	10	0	22
Repton	2	2	0	16	0	20
Stourhead	20	28	15	42	3	108
Thorndike	30	0	9	9	0	48
Wisley	3	12	8	7	0	30
Sub Total	275	166	87	158	32	718
LONGMOORE GARDENS	BEDSITTER	1 BEDROOM	2 BEDROOM	3 BEDROOM	4 BEDROOM	TOTAL FLATS
George Eliott	7	34	12	0	0	53
Joseph Conrad	5	28	53	0	0	86
Aubrey Beardsley	0	8	28	8	0	44
Noel Coward	5	18	21	0	0	44
Sub Total	17	88	114	8	0	227

PDHU-Location of existing isolation valves



LILLINGTON GARDENS					
PROPERTY	HEATING FLOW	HEATING RETURN	HOT WATER FLOW	HOT WATER RETURN	NOTES
Charlwood	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Exbury	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Fairchild	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Forsyth	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Goodyer	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Henry Wise	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Longleat	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Morgan	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Parkinson	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Priory	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Repton	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Stourhead	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Thorndike	Pipe duct	Pipe duct	Pipe duct	Pipe duct	
Wisley	Pipe duct	Pipe duct	Pipe duct	Pipe duct	

PDHU-Location of existing isolation valves-



LILLINGTON GARDENS					
PROPERTY	Heating		Hot Water		BMS Installed
	Plantroom location	Satellite Buildings	Plantroom location	Satellite Buildings	
Charlwood	All Lillington Gardens flats are supplied via individual heating risers branching off the main distribution pipework. There are no heating services plantrooms. Access to the heating risers is via either the underground car parks or via the underground service ducts. All work in the service ducts is considered to be confined spaces and is a minimum of 2 man working		Charlwood Plantroom	-	Yes
Exbury			Phase III Car Park	-	No
Fairchild			Supplied from Henry Wise plantroom	-	No
Forsyth - North			Supplied from Repton calorifier room	-	No
Forsyth - South			Supplied from Parkinson plantroom	-	No
Goodyer			Phase II Car Park	-	No
Henry Wise			Henry Wise plantroom	-	No
Longleat - East			Phase III Car Park	-	No
Longleat - West			Phase III Car Park	-	No
Morgan			Morgan Boilerhouse	-	Yes
Parkinson			South end of Forsyth	-	No
Priory			Phase III Car Park	-	No
Repton			Phase I Car Park	-	Yes
Stourhead - North			Phase II Car Park	-	Yes
Stourhead - South			Phase III Car Park	-	Yes
Thorndike			Phase III Car Park	-	No
Wisley		Phase III Car Park	-	No	

PDHU-Location of existing isolation valves



LONGMOORE GARDENS					
	HEATING FLOW	HEATING RETURN	HOT WATER PRIMARY FLOW	HOT WATER PRIMARY RETURN	NOTES
George Eliott	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder
Joseph Conrad	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder
Aubrey Beardsley	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder
Noel Coward	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder

LONGMOORE GARDENS					
PROPERTY	Heating		Hot Water		BMS Installed
	Plantroom location	Satellite Buildings	Plantroom location	Satellite Buildings	
George Elliot	No individual plantrooms other than valve pits located in the footpaths.				
Joseph Conrad					
Aubrey Beardsley					
Noel Coward					

PDHU-Location of existing isolation valves



LONGMOORE GARDENS					
	HEATING FLOW	HEATING RETURN	HOT WATER PRIMARY FLOW	HOT WATER PRIMARY RETURN	NOTES
George Eliott	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder
Joseph Conrad	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder
Aubrey Beardsley	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder
Noel Coward	Service cupboard	Service cupboard	Service cupboard	Service cupboard	Each flat is fitted with an individual hot water cylinder



PDHU-Options for the future

- The proposed works to be carried out at Morgan House consists of the supply and installation of two new Plate Heat Exchangers which will be served by the District Heating Network, The New Plate Heat Exchangers with associated plant will then provide the main Heating source for all the properties within Morgan House.
- Surveys to be carried out on flats designs to ensure isolation valves are accessible in the event of works being required.
- 800 letters were sent out before Christmas to advise residents of the need for inspection works.
- 40 Survey returns have been received by the team and appointments are being booked.

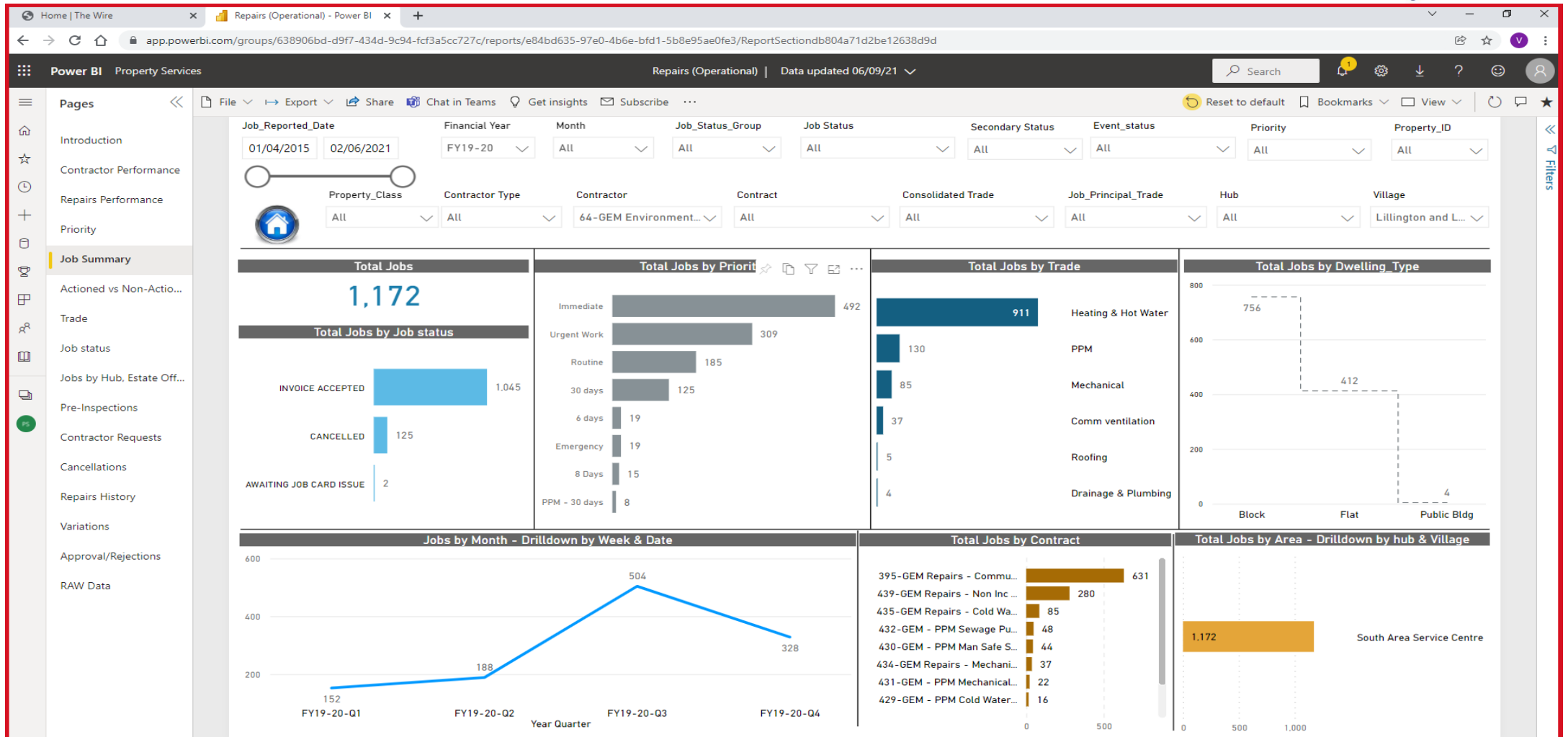


PDHU-Options for the future

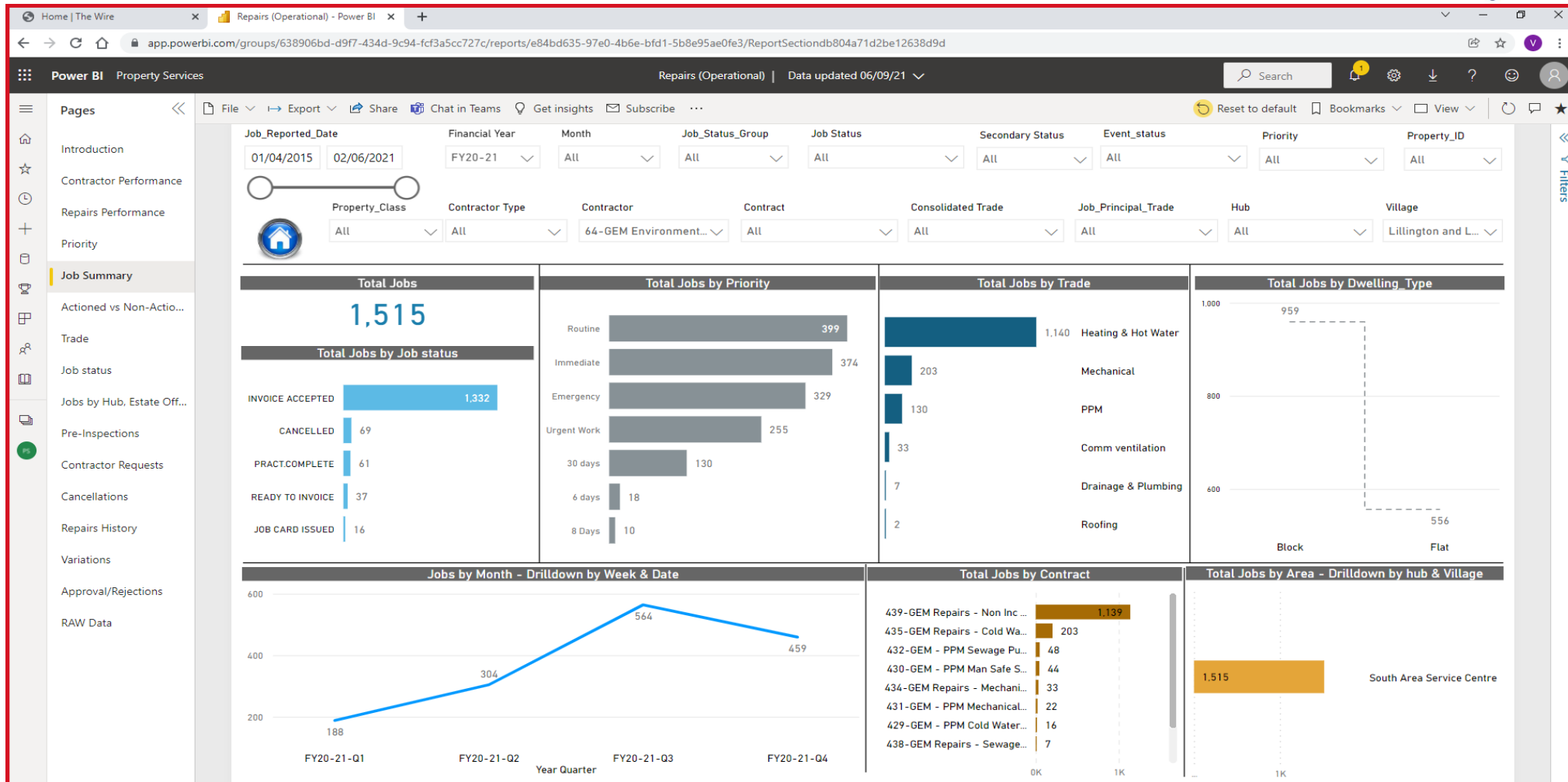
- All new void properties are being 're-piped' in steel barrel pipework and accessible isolation valves are being located with easy access.
- Heating service risers will be inspected and replaced where necessary with new isolation valves cut in to assist with local isolation in the need of emergency or planned work to ensure minimal disruption to residents.
- Increased stock levels held on the estate to assist with more first time fix repairs where possible
- Increased resource levels working on the PDHU with the skillsets to meet the demands, Dedicated RLO working on Lillington and Longmore Gardens Estate
- A dedicated Email address for residents has been set up to engage with the mechanical team directly : l&lheatingandhotwater@westminster.gov.uk



PDHU-Performance- 2019-20



PDHU-Performance- 2020-21



Mechanical Services-Performance- 2021-22



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Performance Information				Target	April	May	June	July	August	September	October	November	December	January	February	March	YTD 2021-22
DM	1.1	Gas Appliances with Landlord Gas Safety Record [CP12]	100%	99.73	99.51	99.71	99.65	99.65	99.7	99.74	99.76	99.73					99.74
SW	1.4	Fire Alarm Tests & Service (monthly)	100%	99.20	100	100	100	100	100	100	99.78	99.56					99.84
JT	1.12	Fall Arrest Testing	100%	100	100	100	100	100	100	100	100	100					100
JT	1.5	Water Tank Testing	100%	100	100	100	100	100	100	100	100	100					100
JT	1.13	Mechanical PPM	100%	100	100	100	100	100	100	100	100	100					100
JT	1.14	Plant commissioning/servicing record (non-domestic) [CP15]	100%	100	100	100	100	100	100	100	100	100					100
NH	1.15	Lift Call Outs	<=220	112	110	142	187	143	145	155	213	181					154
NH	1.16	Lift Trapping	<=20	12	16	10	13	15	10	10	6	8					11
NH	1.17	Lift Service Testing PPM	100%	100	100	100	100	100	100	100	100	100					100

- Target met or exceeded
- On track but off target
- Off track



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