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NHS FM Workforce

Methodology Statement

NHS FM WORKFORCE ESTIMATOR · CALIBRATION & DATA SOURCES

DOCUMENT TYPE	Technical Methodology Statement
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PLATFORM	VeritasEdge™ NHS Module · VIQ-MIL™ v2.0
DATA SOURCES	ERIC 2023/24 · NHS Employers AFC 2025/26 · BICSc NatSoC 2025

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1. EXECUTIVE SUMMARY

This document describes the parametric methodology used by the VeritasEdge™ NHS FM Workforce Estimator to produce FTE (whole-time equivalent) estimates and indicative annual labour costs for NHS Estates facilities. The methodology is calibrated against three published national datasets: the NHS Estates Returns Information Collection (ERIC) 2023/24, the NHS Employers Agenda for Change (AFC) pay scales 2025/26, and the British Institute of Cleaning Science (BICSc) compound productivity rates referenced in NHS National Standards of Healthcare Cleanliness 2025 (NatSoC 2025).

The model is designed for **indicative sizing purposes only**. It produces a parametric baseline against which field verification (on-site task time surveys, ESR cross-check, asset register reconciliation) is applied in a full NHS FM Workforce Study engagement. The estimator is not a substitute for a formal workforce study and does not constitute legal or regulatory compliance advice.

Validation Scenario	Facility	Model Output	Benchmark	Status
Mid-size DGH	45,000m ² · 400 beds · Midlands	92–124 FTE · £68/m ² labour	ERIC £35–95/m ² acute	✓ In range
Specialist Hospital	120,000m ² · 800 beds · London	312–422 FTE · £107/m ²	ERIC £45–120/m ² specialist	✓ In range
Mental Health Trust	18,000m ² · 120 beds · Midlands	21–28 FTE · £39/m ²	ERIC £25–70/m ² MH	✓ In range
Small DGH	20,000m ² · 150 beds · South East	32–43 FTE · £60/m ²	ERIC £35–95/m ² acute	✓ In range

Table 1: Model validation against ERIC 2023/24 published benchmark ranges. Labour index is salary cost only — total FM cost including materials, contracts and utilities is 2.5–3x higher per ERIC national data.

2. MODEL ARCHITECTURE — THE HYBRID FTE ENGINE

2.1 Fundamental principle: area vs activity drivers

NHS FM workforce requirements are driven by two fundamentally different factors depending on the discipline. **Hard FM disciplines** (maintenance technicians for water, electrical, ventilation, gas, lifts, fire) are primarily driven by *floor area* — the volume of plant, systems, and infrastructure that requires maintenance is a function of the building footprint. **Soft FM disciplines** (cleaning, catering, security, waste) are primarily driven by *activity* — specifically bed count and patient throughput — because these services respond to operational demand, not physical space.

A single area-based model systematically understates soft FM requirements. A 400-bed DGH requires approximately 100–140 cleaning FTE regardless of whether the building is 40,000m² or 60,000m². The area-based model that ignores bed count will underestimate cleaning FTE by 5–8x. The VeritasEdge™ hybrid model addresses this by applying separate rate components:

Discipline Type	FTE Driver	Formula	Rationale
Hard FM (Water, Electrical, Ventilation, Gas, Lifts, Fire)	Area-based	$FTE = \text{area_rate} \times (\text{GFA} \div 1,000)$	Maintenance load scales with infrastructure volume
Soft FM (Cleaning, Catering, Security, Waste)	Hybrid	$FTE = (\text{area_rate} \times \text{GFA}/1,000) + (\text{bed_rate} \times \text{Beds})$	Activity demand driven by patient throughput, not floor area alone
Management	Hybrid (light)	$FTE = (\text{area_rate} \times \text{GFA}/1,000) + (\text{bed_rate} \times \text{Beds})$	Overhead scales with total workforce size, proxied by area + bed count

Table 2: Hybrid FTE engine architecture by discipline type.

3. CALIBRATED FTE RATES BY DISCIPLINE

The following FTE density rates were derived from NHS PPM benchmarking studies, ERIC 2023/24 national data, and BICSc NatSoC 2025 compound productivity rates. They are validated to produce labour cost indices within the ERIC published benchmark range across four facility type scenarios.

Discipline	Area Rate (FTE/1,000m ²)	Bed Rate (FTE/bed)	AFC Band	Salary Range	HTM/Standard
Electrical / L8	0.028	0.001	6–7	£37,338–52,809	HTM 04-01
Plumbing / HVAC	0.033	0.001	6–7	£37,338–55,000	HTM 06-02
Mechanical / AHU	0.025	0.000	6–7	£37,338–50,000	HTM 03-01
Gas / MGPS	0.012	0.000	6–7	£37,338–52,809	HTM 02-01
LOLER	0.010	0.000	5–6	£29,970–42,000	LOLER 1998
Systems	0.020	0.000	5–6	£29,970–44,000	HTM 05-02
Cleaning / Env.	0.080	0.150	2–3	£24,465–28,000	NatSoC 2025
Cleaning	0.012	0.035	2–3	£24,465–30,000	FSA / HSE
Security / Ext.	0.008	0.000	2–3	£24,465–27,000	—
Security / HTM 07	0.015	0.002	2–3	£24,465–29,000	HTM 07-01
Security	0.035	0.012	2–4	£24,465–32,000	—
Management	0.012	0.003	7–8b	£46,148–72,000	NHS PAM

Table 3: Calibrated FTE rates and AFC band ranges. AFC bands confirmed against NHS Employers 2025/26 pay scales (3.6% award from 1 April 2025). Cleaning bed rate (0.150 FTE/bed) represents estate-average across clinical and non-clinical areas, calibrated against BICSc compound productivity data and ERIC 2023/24 cleaning cost benchmarks.

4. ADJUSTMENT FACTORS

Factor	Category	Multiplier	Rationale / Source
Acute DGH	Facility type	× 0.95	Lower complexity vs generic baseline; standard DGH asset profile
Specialist/Teaching	Facility type	× 1.15	Higher clinical complexity; research facilities; specialist plant
Mental Health	Facility type	× 0.75	Lower acute dependency; smaller estate footprint; lower HTM density
Community/Primary	Facility type	× 0.65	Minimal acute plant; lower HTM obligation; contracted services prevalent
London	NHS Region	× 1.20	London weighting; Inner London AFC supplement; market rate premium
South East	NHS Region	× 1.10	Home Counties premium; commuter market pressures on wages
Midlands	NHS Region	× 0.98	At or marginally below national average
North East & Yorks	NHS Region	× 0.95	Below national average; regional labour market differential
Low backlog	Backlog band	× 0.88	Reactive maintenance demand below average; fewer emergency calls
Medium backlog	Backlog band	× 1.00	At national average; baseline assumption
High backlog	Backlog band	× 1.12	Elevated reactive maintenance demand; older plant requiring more frequent intervention
Critical backlog	Backlog band	× 1.28	Significant reactive component; potential for emergency shutdowns; 24/7 response elevated
Multiple buildings	Building distribution	× (1 + (n-1)×0.04)	Each additional building adds ~4% overhead for travel, handover, site management

Table 4: Adjustment factors applied to base FTE rates.

5. DATA SOURCES & CITATIONS

Source	Publisher	Application in Model
ERIC 2023/24 Provisional Summary Figures	NHS England Digital	Labour cost benchmark ranges by facility type. Maintenance cost per m ² national distribution (acute: £35–95/m ² , median £65). Cleaning cost national total (£1.5bn / 25m m ²).
Agenda for Change Pay Scales 2025/26	NHS Employers	Band-level salary ranges. 3.6% award confirmed from 1 April 2025. Band 2 minimum £24,465. Band 7 range £46,148–52,809. Band 8a entry £53,754.
NatSoC 2025 — National Standards of Healthcare Cleanliness	NHS England	FR1–FR6 functional risk zone classification. BICSc compound productivity rates (UK adjustment factor 0.75–0.82). Cleaning FTE density calibration.
HTM 04-01, 06-02, 03-01, 02-01	DHSC	Statutory AP appointment requirements. Mandatory minimum staffing for Authorised Person roles. Competency requirements for Band 6–7 AP appointments.
NHS Premises Assurance Model 2026-27	NHS England	PAM Domain 4 statutory compliance flags. AP register requirements. Evidence standards for compliance-based assessment.
PPM Benchmarking Studies (NHS WMA, Opex)	NHS Benchmarking Network	Hard FM FTE density calibration: 0.25–0.40 FTE per 1,000m ² for maintenance technicians across NHS acute estate.
BICSc Compound Productivity Rates — Healthcare	BICSc / ISSA	Cleaning productivity benchmarks by area type. Ward areas ~1,600m ² /cleaner/day (8hr). Mixed estate average 0.15 FTE/bed calibration basis.

6. SCOPE, LIMITATIONS & EXPLAINABILITY

What this model estimates

The VeritasEdge™ NHS FM Workforce Estimator produces indicative estimates of directly employed FM labour FTE and associated annual salary costs. Outputs are calibrated against ERIC 2023/24 national published benchmarks and validated to produce labour cost indices within the published benchmark range for acute, specialist, mental health, and community facility types.

What this model does not estimate

The model does not include contracted services (lifts maintenance contracts, MGPS service contracts, fire detection testing contracts), materials and consumables, utilities, or management overhead costs. Total FM cost including all of these elements is typically 2.5–3× the labour estimate produced by this model, consistent with ERIC 2023/24 national data (total estate cost £13.6bn / 25m m² = £544/m² all-in, of which salary is approximately 35–40%).

Explainability — what we publish vs what we protect

This document publishes the calibration sources (ERIC, AFC, BICSc, HTM, PAM) and the model architecture (hybrid area+bed engine, adjustment factor structure) in full. What is not published are the specific parametric coefficients — the precise FTE density rates per discipline. This is consistent with standard professional practice: a structural engineer publishes the design standard they applied (BS EN 1990) without publishing their proprietary structural analysis software. The sources are public; the calibration is proprietary.

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