Chelsea and Westminster Hospital NHS Foundation Trust
The Hillingdon Hospitals NHS Foundation Trust
Imperial College Healthcare NHS Trust
London North West University Healthcare NHS Trust

NWL Acute Provider Collaborative Board in Common (Public)
18/04/2023
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This report is: Public

North West London Elective Orthopaedic Centre Full Business Case

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Purpose of report

Purpose: Decision or approval

The board of London North West University Healthcare NHS Trust is asked to **approve** this Full Business Case and to **approve** the capital funding requirement of £9.412m for an elective orthopaedic centre at Central Middlesex Hospital.

The North West London Acute Provider Collaborative Board in Common is asked to **note** that the business case has revenue implications, with a net income and expenditure benefit in the first full year of operation of £3.968m to the NWL system. Other key considerations related to the financial and commercial cases, as well as the fact that the FBC has responded to all assurance feedback and requests for additional information, are also highlighted.

Report history

Outline committees or meetings where this item has been considered before being presented to this meeting.

Business Case Review Group 01/04/2023 *Approved*	**Trust Executive Group** 05/04/2023 *Noted for subsequent approval at BiC*	**LNWH F&P** 19/04/2023

Executive summary and key messages

Introduction

The North West London elective orthopaedic centre (NWL EOC) aims to deliver a high volume low complexity (HVLC) surgical hub and a centre of excellence for orthopaedic care in North West London by November 2023. The purpose of this FBC is to offer Value for Money (VfM) and secure capital funding for the proposal. The ambition of the EOC remains the same as the OBC and has been strengthened since the OBC with closer working arrangements via the North West London Acute Provider Collaborative (APC).

An Outline Business Case (OBC) was approved in May 2022, subject to advice and assurance which have been responded to in a Pre-Consultation Business Case (PCBC) published in August 2022 and the Decision-making Business Case (DMBC) was endorsed in March 2023.

What has changed from OBC?

Strategic Case:

- The case for change remains relevant with updated modelling and analysis developing a need to address elective orthopaedic waiting times while aligning with long term strategic models of care as defined by Get It Right First Time (GIRFT), NWL Integrated Care System (ICS) and LNWH Trust strategy.
- The London Clinical Senate said: "*there is a clearly articulated case for change and a background evidence base which supports the quality and outcome improvements anticipated by the changes*".

Economic Case:

- Since the OBC the service selection process was validated and the economic appraisal was refreshed to show option 5 (LNWH DC + IP plus all NWL IP) remains the preferred option, with a NPV of £35.510m over a 25-year period.
- The economic case now includes a summary of the societal benefits, which drive an increase in NPV from £35.510m to £52.771m (driving up the ROI ratio from 3.8:1 to 5.6:1).
- The site selection process was also validated to confirm CMH as the preferred site option. In response to public consultation and assurance feedback, a robust transport solution continues to be designed for the EOC.

Financial Case:

- Capital expenditure is still expected to be £9.412m, and we have confirmed this will come from NHS TIF.
- Refreshed financial modelling shows a net I&E benefit in the first full year of operation of £3.968m to the NWL system.
- The principles underpinning the proposed financial and commercial arrangements between the acute trusts were jointly developed and agreed by the acute trust CFOs in March 2022. This was ratified by NWL APC Collaborative Finance and Performance Committee on 10th March 2023.

Commercial Case:

- The scope of services has not changed since the OBC.
- The physical structure of the centre will comprise of two additional laminar flow theatres, an extended recovery unit and supporting works.
- The design has been created in alignment with LNWH and NWL ICB's Green Plans and Net Zero ambitions and updated to comply with new ventilation requirements.
- The preferred procurement strategy involves a variation to the PFI Project Agreement.

- The tender process commenced in January 2023 for one month. Five tenders were received, and a joint (LNWH/PFI Project Co) recommendation will be made on the preferred Main Contractor and Tender Value to the EOC Programme Board with an intention to award contracts on 20th April 2023.
- A procurement timeline is set out from invitation to tender in January 2023 to the completion of construction works. Enabling works commenced between January and May 2023, in advance of construction commencing.

Management Case:

- The management case has been expanded and revised since the OBC to record the detailed governance model and implementation approach. This includes:
- detailed implementation plan by workstream with four gateways between now and go-live.
- communications and engagement plan that has patients and lay partners as a core component of governance and implementation.
- an ambition to achieve GIRFT accreditation by the end of 2024.
- plan to implement the transport solution through co-design with a working group in response to public consultation, JHOSC and Mayor of London.
- an expanded BRP that measures productivity, cost effectiveness, clinical outcomes, patient access, transport, patient satisfaction and workforce. Clarity on monitoring of in-scope and out-of-scope has been added in response to the London Clinical Senate and Mayor of London.
- a workforce model with individual staff group implementation approach has been developed in response to the Mayor of London, JHSOC and the Public Consultation.
- and articulating which mobilisation functions will be undertaken by whom and by when.

The case concludes with recommendations to the APC Board in Common and a number of appendices including full versions of the refreshed financial tables, BRP and risk register.

Table 1 shows a summary of feedback since the DMBC was published or commitments to additional information to be included in the FBC. A detailed matrix with feedback and how this has been met is included in Appendix 14.

Table 1 – Feedback since the DMBC

Feedback Theme	Source of feedback or request for further information				
	OBC	DMBC	Mayor's Tests	JHOSC	NWL ICB
BRP	✓		✓	✓	
Public engagement and patient involvement	✓	✓	✓	✓	✓
Implementation Plan	✓	✓			
Financial assumptions, updates and value for money		✓			
Workforce model		✓			
Transport solution		✓		✓	✓
Social Care			✓		✓
Enabling works	✓				

Appendices referenced throughout the paper have been made available to Board members separately due to size, and file formats and hence not published on the NWL Acute Provider Collaborative Website. These appendices can be made available to members of the public upon request.

Strategic priorities

Tick all that apply

- ☒ Achieve recovery of our elective care, emergency care, and diagnostic capacity
- ☒ Support the ICS's mission to address health inequalities
- ☒ Attract, retain, develop the best staff in the NHS
- ☒ Continuous improvement in quality, efficiency and outcomes including proactively addressing unwarranted variation
- ☐ Achieve a more rapid spread of innovation, research, and transformation

Click to describe impact

Impact assessment

Tick all that apply

- ☒ Equity
- ☒ Quality
- ☒ People (workforce, patients, families or careers)
- ☒ Operational performance
- ☒ Finance
- ☐ Communications and engagement
- ☐ Council of governors

Click to describe impact

Reason for private submission

Tick all that apply

- ☐ Commercial confidence
- ☐ Patient confidentiality
- ☐ Staff confidentiality
- ☐ Other exceptional circumstances

If other, explain why

NHS
London North West
University Healthcare
NHS Trust

North West London
Elective Orthopaedic Centre
Full Business Case
18th April 2023

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1 Executive Summary

1.1 Introduction

The North West London elective orthopaedic centre (NWL EOC) aims to deliver a high volume low complexity (HVLC) surgical hub and a centre of excellence for orthopaedic care in North West London by November 2023. An Outline Business Case (OBC) was approved in May 2022, subject to advice and assurance which have been responded to in a Pre-Consultation Business Case (PCBC) published in August 2022, the Decision-making Business Case (DMBC) was endorsed in March 2023 and this Full Business Case (FBC) will be presented to the North West London Acute Provider Collaborative Board in Common (NWL APC BiC) on 18th April 2023.

The purpose of this FBC is to offer Value for Money (VfM) and secure capital funding for the proposal. The ambition of the EOC remains the same as the OBC and has been strengthened since the OBC with closer working arrangements via the North West London Acute Provider Collaborative (APC).

1.2 Strategic Case

The case for change focuses on the clear, short-term imperative for addressing elective orthopaedic waiting lists and the longer-term strategic requirement to redefine the model of care whilst delivering a step change in quality and performance as defined by Get It Right First Time (GIRFT) top decile performance.

The case for change continues to be widely accepted since the OBC. The subsequent changes are due to updates in modelling and analysis refreshed since the OBC was published and this chapter sets out the key changes.

Wherever possible, the development of the NWL EOC has been tested against NWL strategies and national best practice. This supports the creation of a new EOC that operates within a system that has broad alignment and stakeholder support. NWL Acute Provider Collaborative (APC) has been fundamental in the development of this proposal. During implementation and opening, the EOC will be accountable to the NWL APC for strategy and business delivery through the EOC Partnership Board.

1.3 Economic Case

Service selection
Since the OBC, the economic appraisal of service options was refreshed to show that option 5 (London North West University Healthcare NHS Trust (LNWH) Orthopaedic day cases and inpatients + all NWL Orthopaedic Inpatients within scope) remains the preferred option.

Using the discounted cashflow over a 25-year period as the measure of return, the return on investment (ROI) is determined by taking the incremental financial cashflow of quantified benefits as a proportion of the initial capital investment made. For the preferred option, this is calculated by taking the return of £35.510m over the initial investment of £9.412m generating a ratio of 3.8:1. This is relatively high and close to the Treasury target ROI for public sector capital investment. This indicates that, over the term of the reported cashflow, the initial investment will be recovered nearly 4 times over. The payback period is 2 years and 357 days from day one of mobilisation.

We have also considered the financially quantified social benefits of the service change, increasing the net present value over a 25-year term of the business case increases from £35.510m to £52.771m. This provides us with an economic ROI ratio of 5.6:1 (in that the net present value covers the £9.412m cost of investment 5.6 times over).

Site Selection
Since the OBC we have reviewed and revised the site selection process to validate Central Middlesex (CMH) as the preferred site option. In response to consultation and assurance feedback, the FBC includes

a transport implementation plan with a working group to develop and deliver an EOC transport solution that works for the population of NWL.

Wider economic benefits

The FBC includes a new piece detailing several societal benefits:

- Positive impact to a patient's long-term quality of life as a consequence of fewer readmissions.
- Positive impact to a patient's long-term quality of life as a consequence of faster access to treatment.
- Reduction in patient sick days from employment as a consequence of faster access to treatment.
- Positive economic impact on local spending as a consequence of increased footfall.
- Negative impact of increased carbon emissions as a consequence of additional average journey distance to travel to care.

1.4 Commercial Case

The commercial case has been developed since the OBC to describe the process and requirements to select a construction partner.

The scope of the services has not changed since the OBC with two additional laminar flow theatres, an extended recovery unit and supporting works. Modern methods of construction will be used where possible while key commercial and design standards complied with. The Design has been created in awareness of LNWH and NWL ICB's Green Plans and Net Zero ambitions and updated to comply with new ventilation requirements.

The preferred procurement strategy for the EOC is to undertake a variation to the PFI Project Agreement (PA). LNWH is experienced in this process and believes it offers the best value for money.

The tender process commenced in January 2023 for one month. Five tenders were received, and a joint (LNWH/PFI Project Co) recommendation will be made on the preferred Main Contractor and Tender Value to the EOC Programme Board with an intention to award contracts on 20th April 2023.

A procurement timeline is set out from invitation to tender in January 2023 to the completion of construction works in November 2023. Enabling works commenced at risk with approval from the LNWH Capital Review Group in advance of the FBC between January and May 2023.

The nature and extent of the construction works are such that there are no material Town Planning considerations.

1.5 Financial Case

The financial case has been refreshed since the OBC, including the income and expenditure position for the first two years as set out below. This shows a net income and expenditure benefit in the first full year of operation of £3.968m to the NWL system.

Table 1 - Income and expenditure summary for years 1 and 2

	Year 1 2023/24	Year 2 2024/25
	£m	£m
Income	18.906	31.613
Expenditure	(18.766)	(27.645)
Surplus/(Deficit)	0.140	3.968

Capital expenditure is still expected to be £9.412m, which will come from NHS Targeted Investment Funding (TIF), following a successful bid. If there is a delay in receipt of TIF funding, the Trust will proceed at risk from its own capital programme whilst seeking capital funding from NWL ICS. It will need to monitor the position on an ongoing basis. The capital is within the NWL ICS capital departmental expenditure limit (CDEL).

The capital spend is profiled £1.3m in 2022/23 and £8.1m in 2023/24. £0.200m of enabling works is being funded in advance of business case authorisation to ensure the critical path for the development and construction of the EOC remains on track.

Taking into account the modelling principles employed and the results of the sensitivity analysis, the financial case demonstrates that the financial modelling assumptions are sufficiently prudent for the model to be able to absorb the most likely outcomes over mobilisation and over the longevity of the case.

The sensitivity and scenario analysis highlights the robustness of the modelling when tested against a number of parameters i.e., rising inflation, impact of inner London weighting from any TUPE staff and cost of temporary staffing for groups with highest vacancies.

The principles underpinning the proposed financial and commercial arrangements between the NWL Acute Trusts have been jointly developed and were agreed by the acute trust Chief Financial Officers (CFOs) on 4th March 2022. This was ratified by NWL APC Collaborative Finance and Performance Committee on 10th March 2023.

The financial model has been developed considering the recurrent investment needs flagged to facilitate a Lead Provider Hosting model. Revenue and capital costs have been captured to facilitate the needed digital infrastructure specific to the EOC development. To support realisation of productivity ambitions, significant investment has been included in new ways of working training.

As part of the governance process, an addendum to the FBC has been produced, setting out the activity and financial implications for each organisation to support decision making on an open and transparent basis.

1.6 Management Case

The management case details the arrangements in place for the management, governance, delivery and monitoring of the development of NWL EOC.

The management case of the FBC been revised and updated from the OBC to record the detailed management arrangements that have been put in place to ensure the successful delivery and evaluation of the project.

Since the OBC, the governance model has been further developed with clearly defined reporting lines to both the LNWH Trust Executive and the NWL APC. The EOC's structure has been created that recognises the EOC as a distinctive partnership clinical service, while also reflecting the structure of a LNWH clinical division to ensure full accountability and governance.

An implementation approach that uses multiple gateways between now and go-live; these serve as assurance checkpoints, with each gateway being overseen by a Gateway Review Panel that draw on internal and external peers for review.

Detailed implementation timelines are split by the four workstreams: Corporate, Clinical Design (including digital), Workforce and Estates to provide a clear critical path which will be reviewed and updated as the project progresses.

Since the OBC, a clinical implementation section has been developed that describes the approach to theatre allocation within the EOC amongst the four trusts and the ambition to achieve GIRFT accreditation by the end of 2024.

In response to public consultation feedback and advice & assurance provided by key stakeholders following publication of the DMBC, the FBC includes a transport implementation plan with a working group to develop and deliver an EOC transport solution that works for the population of NWL. This group's membership will be determined in April and will include patients, carers and staff.

The benefits realisation plan (BRP) has been expanded to include detailed KPIs on productivity, cost effectiveness, clinical outcomes, patient access, transport, patient satisfaction and workforce. It also describes how in-scope and out-of-scope activity will be monitored by the EOC and the wider NWL to ensure parity of access.

Management of any significant barriers and risks to implementation will be undertaken via the Shadow Partnership Board and EOC Management Board, with monthly reports to the APC Board in Common. A comprehensive project risk register was developed for the OBC and has been updated, using qualitative measures to calculate the overall level of risk according to their impact and probability.

1.7 Recommendation

This Full Business Case sets out a vision for a new EOC based on a compelling case for change. When delivered, it will achieve a significant improvement in the quality and access to planned orthopaedic care for the people of NWL.

The business case seeks approval from the board of LNWH for the capital funding requirement of £9.412m for an EOC at Central Middlesex Hospital.

The APC Board-in-Common is asked to note that the business case has revenue implications, with a net income and expenditure benefit in the first full year of operation of £3.968m to the NWL system. Other key considerations related to the financial and commercial cases, as well as the fact that the FBC has responded to all assurance feedback and requests for additional information, are also highlighted.

2 Introduction and Background

Chapter Summary
Chapter 2 sets out the process so far to create an elective orthopaedic centre (EOC) in North West London (NWL) with a preferred option of a single site centre at London North West University Healthcare NHS Trust (LNWH).

Key messages

- The purpose of this Full Business Case (FBC) is to offer Value for Money (VfM) and secure approval for the capital spend.
- Since the OBC was first approved in May 2022, the proposal has gone through several milestones including public consultation, NHS England assurance and Mayor of London advice.
- Following DMBC approval in March 2023, LNWH is the lead provider working in partnership with the NWL Acute Provider Collaborative (NWL APC).
- The vision for a NWL EOC remains consistent with Getting It Right First Time (GIRFT) best practice and British Orthopaedic Association (BOA) recommendations.

2.1 Purpose of the Full Business Case

The NWL EOC aims to deliver a high-volume low complexity (HVLC) surgical hub and a centre of excellence for orthopaedic care in North West London by November 2023. An Outline Business Case (OBC) was approved in May 2022, subject to advice and assurance which have been responded to in a Pre-Consultation Business Case (PCBC) published in August 2022, the Decision-making Business Case (DMBC) was endorsed in March 2023 and this Full Business Case (FBC) will be presented to the North West London Acute Provider Collaborative Board in Common (NWL APC BiC) on 18th April 2023.

The purpose of this FBC is to:

- Record the findings of the procurement phase.
- Identify the option that offers the 'most economically advantageous tender' - identifying the marketplace opportunity which offers optimum Value for Money (VfM) and achieves best public value.
- Set out the commercial and contractual arrangements for the negotiated deal.
- Confirm the deal is still affordable.
- Put in place the agreed management arrangements for successful delivery, monitoring and post-implementation evaluation of the scheme.

Much of the work undertaken in producing this FBC has focused on revisiting, and updating where necessary, the conclusions of the Outline Business Case (OBC), reviewing and refining the new model of care and documenting the outcomes of the procurement. Additionally, this FBC captures and responds to feedback from the various milestones on the assurance and decision-making route that are described in the key messages above.

The FBC follows the recommended Five Case Model as per the UK HM Treasury Business Case Guidance (The Green Book: appraisal and evaluation in central government HM Treasury guidance on how to appraise and evaluate policies, projects and programmes 3 Dec 2020[1]). The five cases are strategic, economic, financial, commercial and management.

This document demonstrates a revisited and compelling case for change and explains how the proposed new care model will address the service requirements and constraints outlined in the case for change and deliver on the investment objectives. The FBC also revisits the affordability, benefit quantification and the funding required, alongside the procurement and management processes put in place to ensure successful delivery of this scheme.

2.2 Approvals and process so far

The proposal for an EOC has met several key stages of endorsement within LNWH and the wider North West London Integrated Care System (NWL ICS):

Table 2 - NWL EOC governance timeline

Date	Milestone	Governance forum
24 May 2022	OBC approved	LNWH Trust Board
27 September 2022	PCBC endorsed	NWL ICB Board
19 October 2023	Start of public consultation	n/a
20 January 2023	End of public consultation	n/a
27 January 2023	Public consultation report published and endorsed	NWL EOC Programme Board NWL ICB Service Change Governance Project Delivery Group Public Consultation Steering Group
16 February 2023	IIA approved	NWL ICB EHIA panel
23 February 2023	Present public consultation report, refreshed IIA and refreshed evidence informing decision making	NWL ICB Strategic Commissioning Committee
8 March 2023	Present public consultation report and update	NWL JHOSC
14 March 2023	Present draft DMBC	NWL APC Board in Common
21 March 2023	DMBC endorsed	NWL ICB Board
5 April 2023	FBC presented	LNWH Trust Executive Group
18 April 2023	FBC presented	NWL ICB APC Board in Common

2.3 Origins of the proposal

The four acute NHS trusts in NWL – Chelsea and Westminster Hospital NHS Foundation Trust (CWHFT), The Hillingdon Hospitals NHS Foundation Trust (THHFT), Imperial College Healthcare NHS Trust (ICHT) and London North West University Healthcare NHS Trust (LNWH) – have been working closely together throughout the response to COVID-19 and in the period since we emerged from the pandemic. This led to the establishment of a formal Acute Provider Collaborative (APC) in July 2022.

The APC forms part of the NWL Integrated Care System (ICS). The provision of healthcare services for the population of NWL is overseen by the NWL Integrated Care Board (ICB) and it is the population's needs that are at the heart of the proposal set out in the PCBC, which aims to improve planned elective orthopaedic care service delivery.

The case to improve planned elective orthopaedic care service delivery remains undiminished. To support collaborative and coordinated working across the acute collaborative providers, a lead provider model was put in place. LNWH is the lead provider for elective orthopaedic care and, again drawing on evidenced best practice, the Trust has led work on exploring the potential for a dedicated EOC for NWL, focused on determining whether greater benefits to patient care in terms of quality, equity, efficiency and sustainability would be achieved by creating an EOC for routine, planned inpatient orthopaedic surgery in NWL.

2.4 Ambition of the EOC

The vision for a NWL EOC is consistent with the model recommended by GIRFT and the British Orthopaedic Association (BOA) and adopted widely in London and nationally.

The intention is to create a centre of excellence for planned orthopaedic care, delivering productivity and quality of care for patients that consistently meets best practice, delivers optimum value and builds on the learning from the South West London Elective Orthopaedic Centre (SWLEOC) model and other EOCs.

The NWL EOC will be fit for the future. It is designed using evidence from a range of sources, in addition to GIRFT and the BOA, including the National Joint Registry and other professional bodies. There will be sufficient capacity to meet current and future demand resulting in timely access to services.

The potential benefits for patients will be:

- faster access (due to sufficient capacity).
- equitable access.
- consistent and best practice care in a centre of excellence.
- better clinical outcomes.
- improved preoperative care.
- shorter length of inpatient stay.
- dedicated facilities and reduced likelihood of cancellation.
- dedicated, specialist post-operative care and service.
- increased investment due to potential savings from repatriation from out of sector.
- a COVID-secure environment.

The GIRFT vision is for 'cold' elective surgical hubs, offering ring-fenced beds and ultra clean air theatres, thus delivering evidence-based best practice in relation to protection against infection. Standardisation of care ensures the highest levels of productivity and value for money. This proposal is compatible with best practice recommendations from GIRFT, as shown table 3, and is supported by the National Director of Clinical Improvement for the NHS.

Table 3 - GIRFT best practice recommendations for elective orthopaedics

Theme	GIRFT comment	Does the EOC meet best practice?
Ring-fenced beds	Best practice is rigidly to enforce ring-fencing of elective orthopaedics minimises infection. Some trusts have achieved this, others have not.	✓
Hot and cold sites	By separating "hot" unplanned emergency work from their "cold" elective work, trusts have seen reductions in average length of stay, reductions in cancellations of surgery and increased elective activity during winter pressures.	✓
Minimum volumes	Surgeons should perform 35 or more total hip replacements per year to avoid increased complication rates. There is still work to be done with providers to achieve this.	✓
Choice of implant	Surgeons should follow the evidence that choice of implant should be tailored to the patient need. Best practice is that 80% of patients over 70 should receive a cemented hip.	✓
Surgical site infection (SSI)	Variation in SSI rates were found when GIRFT started their visits. Ring-fencing, hot/cold sites and laminar flow are key factors in reducing infections.	✓
Rehabilitation services	Particularly relating to increased physiotherapy service for elective and hip fracture patients – 7 days a week in hospital and continuity into the community.	✓
Procurement	Variable implant costs and use of loan kits has been tackled through improved visibility and price negotiations.	✓

3 Strategic Case

Chapter Summary
Chapter 3 sets out how the case for change has been reviewed and re-validated since the Outline Business Case (OBC) with a clear understanding of the changes faced within the system, as well as the rationale, drivers and objectives for the proposal.

Key messages:
The drivers for change remain undiminished:

- North West London (NWL) Orthopaedic waiting lists currently stand at 16,000 patients.
- There is inequality in access to elective orthopaedic services among Black, Asian and minority ethnic (BAME) groups.
- NWL elective orthopaedic care underperforms against key quality indicators.
- Insufficiently joined-up care across primary, community and acute services and care that is not sufficiently focused on the needs of the patient.
- There remains significant unwarranted variation in theatre utilisation and downtime.
- Some healthcare roles are challenging to recruit.

The case for change aligns with national best practice and NWL Integrated Care System (ICS) strategy to move towards high volume, low complexity surgical hubs.

3.1 Case for change

The case for change has been widely accepted through the OBC, PCBC, DMBC and external assurance. The six drivers for change identified remain undiminished:

- Growing demand and increasing waiting times.
- Population health challenges, including large health inequalities.
- Underperformance against key quality indicators, wide variations in quality and disruption to planned care caused by surges in unplanned car.
- Insufficiently joined-up care across primary, community and acute services and care that is not sufficiently focused on the needs of the patient.
- Unwarranted variations in theatre utilisation and downtime.
- Staff recruitment and retention challenges.

Waiting lists and waiting times
The total NWL orthopaedics waiting list for care has been rising with an approximate 30% increase since April 2022 following elective recovery since the disruption caused by COVID-19. Due to winter pressures, this list has grown by about 1,000 additional patients since September 2022. The waiting list, as of January 2023, currently stands at over 16,000 patients.

Waiting times for inpatient surgery from decision to admit (DTA) have improved slightly since 2021/22 from 24 to 22 weeks, although still worse than 2019/20 where it was 15 weeks. This metric is measured from the date the patient is added to the waiting list (once both the patient and clinician decide there is a need for surgery) until completion of the surgery itself.

The number of patients waiting more than a year in NWL for elective orthopaedic surgery specifically has risen by c.200 from 4 patients pre-COVID-19.

As a result of establishing an EOC waiting times between DTA and surgery for inpatients will see a reduction in the region of 3-weeks at Year 1 and 9-weeks at Year 2. This will mean patients waiting times for orthopaedic surgery will halve, in most cases, at year 2, and the number of patients on the waiting list will reduce to pre-COVID levels.

Table 4 - Modelled reduction of DTA to surgery waiting times for day case and inpatients for all NWL elective trauma and orthopaedic care following the opening of the EOC (midpoint (range) in weeks)

	No EOC	EOC opens	
	Current Wait	**Year 1**	**Year 2**
EOC Inpatient	22 (18-29)	19 (15-24)	13 (9-18)
NWL Day case (excluding EOC)	15 (13-16)	11 (8-15)	6 (3-10)

Population health challenges

The projected population for London by 2050 is expected to reach over 10 million people as per 2020 GLA Housing Led Population Growth Projections. Musculoskeletal disorders remain the third leading contributor to the total burden of disease (represented by disability-adjusted life years (DALYs) in Greater London and increased by nine per cent between 2009 and 2019. People aged 65 and over account for a third of elective orthopaedic patients in NWL. These three factors combined show an ageing population with health challenges that will lead to increased demand on MSK services.

Demographic analysis of the historic use of elective orthopaedic services across NWL has shown that some health inequalities exist across deprivation and ethnicity. Addressing these is a priority for NWL ICB, and actions to reduce health inequalities will be incorporated into the design and implementation of the EOC.

The IIA has noted that historic use of elective orthopaedic services is slightly higher in the more deprived areas of NWL. This reflects the higher prevalence of MSK disorders in the more deprived deciles of the population, which the Mayor of London has also noted.

The IIA has also noted that the historic use of elective orthopaedic services is lower in the Black Asian and Minority Ethnic groups, compared to the white population. Research from the 2022 Health Survey of England[1] indicates a similar prevalence of MSK conditions among ethnic minorities compared to the national average. While ethnic minorities have a younger population on average, so you would expect a lower use of elective orthopaedic services, there is still a gap when adjusting for age. This suggests inequalities in access to elective orthopaedic services.

The MSK pathway will be routinely reviewed to identify and resolve bottlenecks to enable a seamless pathway and identify areas which might be driving health inequalities in access or outcomes. The EOC will actively monitor its waiting lists to avoid introducing any further inequalities within any protected characteristics or higher levels of deprivation. These inequalities are likely to arise at different points throughout the MSK pathway, and the EOC can help reduce inequalities within secondary care. However, the new community MSK pathway offers an opportunity to address inequality earlier in the pathway.

Underperformance against key quality indicators

NWL elective orthopaedic care underperforms against key quality indicators (KQI), from model hospital data and patient reported outcome measures (PROMs) across all Trusts.

When refreshed to Q2 2022/23 there has been no improvement in performance against key quality indicators (KQI) when compared to the OBC.

Table 5 - Key quality indicators for NWL

	ICHT	LNWH	CWHFT	THHFT
OBC KQI Average	Q3	Q3	Q2	Q4
FBC KQI Average	Q3	Q3	Q3	Q4

Key	Q1 – Top quartile performance	Q2 – Second quartile performance	Q3 – Third quartile performance	Q4 – Bottom quartile performance

[1] https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england

Estates and efficiencies
There remains significant variation in theatre utilisation and downtime across the NWL acute trusts providing elective orthopaedic surgery since the PCBC.

As part of the HVLC programme, GIRFT has set targets for Integrated Care Systems and providers to achieve the following:

- Cases per session - 2 cases per 4-hour list.
- Theatre utilisation - 85% utilisation by 2024/25.

Table 6 - Theatre efficiency and utilisation across NWL

	OBC (FY 2020/21)		DMBC (FY 2021/22)	
	Average number of orthopaedic cases per operating session	Theatre session utilisation (capped)	Average number of orthopaedic cases per operating session	Theatre session utilisation (capped)
NWL ICB T&O	1.4	70%	1.8	63%

Table 6 shows that while NWL theatre utilisation has not recovered post COVID-19, there have been improvements in the number of patients treated per session for all orthopaedic surgery. This is an average of all simple and complex, elective and trauma, inpatient and day case procedures across the system.

The development of a NWL EOC will enable more transformational change right through the peri-operative orthopaedic surgery pathway that address the barriers to effective and efficient theatre utilisation along with improving outcomes for patients and ensuring nobody is left behind. The development ensures that there is a clear focus and place for longer routine cases and shorter cases (these include day cases to be delivered more locally) both which are commonly referred to as high volume low complexity surgery. Offering high volume low complexity surgery using this model offers proven efficiencies of scale and has been shown to improve quality and patient experience.

Workforce: recruitment and retention
Recruitment and retention of skilled and engaged staff is one of the biggest challenges facing the NHS. The EOC plans to meet these challenges by:

- providing a greater range of training and career development opportunities, including new roles, such as advanced clinical practitioners and care navigators.
- making it easier for staff to move across roles and partner employers, with common approaches to ways of working.
- increasing resilience, including through greater appropriate cover.
- reducing sickness and absence rates.
- increasing more flexible working.
- reducing the use of bank and agency through more effective cover of the rotas with permanent staff.
- ensuring trainees and students have access to the highest quality education and training.

A report published in the British Journal of Healthcare Management in November 2022[2] examined four case studies and outlined how surgical hubs can be harnessed as a tool to improve training, retention, and overall staff experience:

"The volume of activity that takes place in a surgical hub can be an asset to training, as described in the Wrightington Hospital and Croydon and Purley Elective Centres case studies. This was also highlighted in the RCSE report (2022), which cited an example from the hub at the Surgical Treatment Centre in Roehampton, where a urology trainee had been able to perform 297 surgeries in just 5 months. The case studies also indicate that surgical hubs can provide an environment that is more conducive to learning than an acute hospital. Particularly in standalone sites, registrars, fellows, and other trainee staff can be

[2] Optimising surgical hubs for staff: case studies on training, wellbeing and retention, Tim Briggs, Peter Kay, Stella Vig, Alvin Magallanes, Haroon Rehman, Mary Fleming, and Isobel Clough 28:12, 1-9

ringfenced so they can focus on learning without the possibility of being called away. As mentioned in the Wrightington Hospital case study, this creates an environment in which trainees can flourish and lists can be planned in a way that balances efficiency with opportunities for learning."

As an innovative care model, with its potential for a range of new roles and ways of working and an aspiration to embed best clinical practice, the EOC will help us with both staff recruitment and retention. Ensuring the EOC is part of an integrated, end-to-end pathway together with the other NWL hospitals providing orthopaedic surgical care and with primary and community care partners, will help with wider staff recruitment and retention.

Conclusion
The case for change remains true and as relevant as when the OBC was published. The demand for elective orthopaedic care remains high in NWL with over 1,000 people added to the waiting list in less than a year. The mixed use of theatres and beds owing to demands for urgent and emergency care continues to challenge achieving more effective theatre utilisation and quality improvements for more routine, planned inpatient orthopaedic surgery in NWL.

3.2 Alignment with National, ICS and Trust strategy

Orthopaedics is one of the highest volume specialties and has one of the longest waiting lists. It is one of the first specialties to which GIRFT was applied to help drive efficiency, throughput and cost effectiveness. GIRFT first shone the light on areas for focus and improvement in Orthopaedics in March 2015. GIRFT identified three key steps to improve quality and productivity for high volume, low complexity (HVLC) surgery. These are:

1. separating elective and non-elective surgery
2. increasing day case surgery rates
3. improving the utilisation of asset such as operating theatres, x-ray equipment and other complex equipment, increasing theatre productivity and creating more efficient care pathways.

The NHS Elective Recovery Plan also includes surgical hubs as a key measure for focusing on high-volume routine surgery to enable a rapid increase in the number of patients can get seen more quickly, ensuring that emergency cases do not disrupt operations and cause cancellations or delays. Surgical hubs will reduce waiting lists, improve patient outcomes create a centre of excellence for clinical excellence and level up patient access and performance.

The NWL ICS Strategy is currently in development. When published it will also establish the framework for the ICS Estates Strategy. The ICS strategy will highlight a core ambition to improve access to elective surgery by moving to high volume, low complexity centres like the EOC. This draws upon best practice from other parts of England where the establishment of dedicated EOCs has led to improved clinical outcomes and has enabled more orthopaedic activity to be undertaken throughout the year, helping to reduce waiting times for life-changing joint replacements. Dedicated orthopaedic theatres will release capacity in other hospitals, contributing to elective recovery in other specialities. The EOC will bring together patients and specialists from across NWL in a purpose-designed centre with the goal of delivering rapid access and world-class clinical outcomes.

LNWH published its strategy for 2023-2028 in February 2023 called "Our Way Forward". The strategic vision was to place "Quality at our HEART", against which the EOC with its demonstrated quality benefits strongly aligns. The EOC supports each of the strategy's objectives addressing quality of care (including equity, timeliness and sustainability), high-quality employer, improved non-clinical support services and a commitment to partnership working. The strategy included the ambition for CMH to be an EOC.

An Integrated Impact Assessment, Equality Health Impact Assessment and Quality Impact Assessment have been completed, considering impacts on the different groups of the population of NWL, including those in the more deprived areas within NWL, and those with protected characteristics as defined by the UK government[3], and set out the mitigating actions that have be incorporated into the implementation plan of this FBC. This provides evidence and information to NWL ICS decision-makers to enable them to fulfil their duties under section 149 of the Equality Act 220 and section 14z35 of the NHS Act 2006.

[3] https://www.gov.uk/discrimination-your-rights

4 Economic case

Chapter Summary
Chapter 4 identifies and appraises the service and site options for the delivery of the project to recommend what is most likely to offer best value for money, and what aligns most closely with the established investment objectives and critical success factors.

Key Messages

- Following completion of the Public Consultation and DMBC phases of this programme, the recommended option as detailed in the OBC (option 5) has been endorsed as the preferred option.
- The economic appraisal shows the preferred option generates a positive NPV of £35.510m over a 25-year span. This is a result of this option achieving the optimal balance between efficiency gains and activity, income, and use of resources through the optimisation of capacity created.
- Using the discounted cashflow over a 25-year period as the measure of return, the return on investment (ROI) is determined by taking the incremental financial cashflow of quantified benefits as a proportion of the initial capital investment made. This is calculated by taking the return of £35.510m over the initial investment of £9.412m generating a ratio of 3.8:1. This is relatively high and close to the Treasury target ROI for public sector capital investment. This indicates that, over the term of the reported cashflow, the initial investment will be recovered nearly 4 times over. The payback period is 2 year and 357 days from day one of mobilisation.
- When factoring in the societal benefits, the NPV over a 25-year term increases from £35.510m to £52.771m, providing an economic return on investment of 5.6 times (in that the NPV covers the £9.412m cost of investment 5.6 times over).
- Five hurdle tests have been developed and used to assess the NWL sites to determine the optimum location for the NWL EOC. This has identified CMH as the preferred location based on factors which have been used to develop Orthopaedic Centres nationally and tailored for the NWL context.

The Trust has reviewed the options available to establish the model of care for the NWL EOC. The model of care has is evaluated from a non-financial perspective followed by a non-financial assessment of site location options. The economic appraisal is then undertaken based on the model of care options, assuming the preferred site location.

4.1 Service selection – long list appraisal

The following eight options were identified based on delivering the principle of creating an EOC of excellence for NWL, drawing upon the experience of other recently established NHS EOCs. While the Royal National Orthopaedic Hospital is in NWL, it was not considered as an option as it plays a regional role rather than a sector one, and does not carry out the routine, low complexity orthopaedic procedures considered in the business case. Do nothing/ Do minimum options were included in line with NHSE service change guidance and HM Treasury Green Book Guidance:

- Option 0: Do Nothing – Retain the current model of distributed elective Orthopaedic Surgery across the NWL catchment area.
- Option 1: Do Nothing Plus – Option 0 plus Orthopaedic Joint Weeks (based on proof of concept currently being undertaken within LNWH).
- Option 2: Do Minimum – Option 1 plus return to “business as usual” activity levels pre COVID-19.
- Option 3: All NWL Orthopaedic inpatient activity but no day cases.
- Option 4: LNWH Orthopaedic day cases and inpatients + NWL hip and knee joint replacements.
- Option 5: LNWH Orthopaedic day cases and inpatients + all NWL Orthopaedic Inpatients.
- Option 6: LNWH Orthopaedic day cases and inpatients + NWL Orthopaedic day cases and inpatients.
- Option 7: LNWH day cases and inpatients + NWL day cases and inpatients + NHS day cases and inpatients currently outsourced to the private sector (the latter applies to this option only)

4.1.1 Investment objectives and critical success factors

A workshop was held in November 2021 to shortlist the options for the services, with representation from orthopaedic clinicians, therapies, estates, operations, nursing, and finance. The workshop qualitatively assessed each option against the investment objectives (IOs) and critical success factors (CSFs).

Table 7 - NWL EOC Investment Objectives

Investment Objective	Description
a) Improve Outcomes	To deliver improved outcomes without raising costs. To reduce surgical site infections.
b) Improve Equality of Access	To improve equality of access by introducing a single waiting list for inpatient elective orthopaedics across NWL.
c) Reduce Inequalities	To reduce inequalities by delivering accessible elective orthopaedic care to groups within our population who find it harder to access care.
d) Improve Staff and Patient Satisfaction	To recruit, retain and develop staff and achieve high levels of staff satisfaction. To improve patient experience.
e) Improve Productivity and Reduce Variation	To achieve best practice by reducing variation and meeting top decile performance for length of stay and cases per list.

Table 8 - NWL EOC Critical Success Factors

Critical Success Factor	Description
a) **Strategic Fit**	How well the option: • Meets the NW London HVLC strategic aims (i.e., risk mitigation; resilience & recovery; system redesign).
b) **Capacity & Capability**	How well the option: • Can be delivered within a robust sector-wide governance framework. • Appeals to all partner trusts.
c) **Affordability**	How well the option: • Can be financed from available capital funds. • Aligns with ICS investment priorities. • Improves financial sustainability.
d) **Achievability**	How well the option: • Can ensure operational start date in 2022/23 to start improving PTL back to pre-COVID BAU. • Can provide the required staffing numbers. • Can be delivered with appropriately skilled staff.
e) **Value for Money**	How well the option: • Optimises the use of NHS resources (i.e., staff; estate). • Optimises the use of available NWL estate.

From the longlist of the eight service options, five service options were shortlisted during the workshop by assessing each option against the IOs and CSFs.

4.1.2 The services shortlist

The shortlisted options were Options 1, 4, 5, 6 and 7. The rationale for each of the shortlisted options is detailed below:

- **Option 1 –** This option scored low. There is limited evidence currently of the benefits of 'joint weeks', as they tend to have a detrimental effect on productivity in the weeks before and after. It was, however, the most appealing of the 'Do nothing' options as it offered more potential for productivity improvements than returning to business as usual which, even though it received the same score, was less credible as a baseline comparator option.

- **Option 4 –** This option delivers improved clinical outcomes for the patient cohort it serves. It largely meets the objectives of improved access, equality, and productivity for that cohort, and offers an opportunity for staff to work in a centre of excellence. It also largely meets the national and sector strategic agenda. It scores lower than other options because it does not fully meet any IO or CSF, other than improved clinical outcomes, because it benefits a more limited cohort of patients.
- ***Option 5* –** This was the highest scoring option, delivering improved clinical outcomes to the patient cohort it serves. It fully meets all critical success factors, meeting the national and sector strategic agenda while being deliverable within the expected resource. This was the only option that was considered to be value for money given that the projected level of activity within scope of this option is deliverable within the currently available NWL estate.
- **Option 6 –** This option, while fully or largely meeting the objectives and fully meeting the national and sector agenda and being broadly supported by partners, was considered only partially affordable or deliverable given the size of the capacity required. It was considered likely that there is no location that could be identified that could reasonably or affordably provide the capacity required.
- **Option 7 –** The advantages and disadvantages of this option were similar to those of Option 6 but scored lower against two criteria. It was considered unachievable within the required time frame because of the complexity of untangling existing arrangements with providers and was considered more complex in terms of governance and appeal to the four acute trusts. As with Option 6, it was considered likely that there is no location that could be identified that could reasonably or affordably provide the capacity required.

4.2 Service selection - short list appraisal

The scoring of the five shortlisted service options was undertaken by a multidisciplinary group, which included clinical representation, to identify one preferred option for the services. The following evaluation criteria were developed, weighted, and scored to reflect their relative order of importance:

Table 9 - Weighted scores for shortlisted service options

			Option 1	Option 4	Option 5	Option 6	Option 7
Evaluation criteria	Sub-criteria	Criteria weightings	Weighted scores				
1 Quality of Care and Safety	a) Impact on clinical outcomes b) Improved patient safety c) Enhanced infection control	23	46	161	184	161	161
2 Activity and Capacity	a) Can accommodate activity and has capacity to expand to meet demand	10	20	60	70	70	70
3 Patient Pathways, Flow and Access	a) Facilitates more efficient pathways, supporting rapid flow, as reflected in impact on PTL b) Supports more equitable access and patient choice c) Reduces lengths of stay d) Lowers likelihood of cancellation e) Model of care addresses inequalities	20	20	120	140	120	120

4 Workforce	a) Enables improved retention and recruitment b) Staff development – excelling in orthopaedics c) Workforce remains a key consideration in all NWL Trust Board Assurance Frameworks	8	36	108	144	108	108
5 System Wide	a) Achieves centre of excellence for all major joints b) More effective management and use of theatre resources	5	5	30	35	40	40
6 Operational sustainability	a) Services can be maintained in the event of a surge in demand or through subsequent waves of COVID b) Enables separation of elective and emergency activity	17	15	90	105	90	90
7 Ease of Implementation/ Deliverability	a) Requires minimal disruption to services during implementation	12	96	60	60	48	48
8 Teaching and Research	a) The solution supports teaching and research activities by providing an environment of sufficient size which will be attractive to staff.	5	30	40	40	30	30
Total Weightings = 100		100					
TOTAL RAW SCORE			23	50	57	50	50
TOTAL WEIGHTED SCORE			268	669	778	667	667
RANK			5	2	1	3	3

The results of the final service evaluation show that the preferred service option is Option 5 which scored higher than the other options. This is driven by:

1. **Quality of care and safety –** Option 5 is marginally better because there is a wider evidence base of success with other centres of excellence.
2. **Workforce –** recruitment is better with centres of excellence, although there is a tipping point beyond which the benefits of consolidation are eroded because other sites become denuded for example, for trauma.

3. **Operational sustainability –** currently, NWL does not have a fully hypothecated workforce across the system for elective and emergency. There are underlying workforce gaps. A relatively much larger centre would create less flexibility if located in hospitals that have A&E and trauma and which may have to repatriate surgeons to maintain core services in the originating hospitals.

The clinical model for the EOC is based on treatment of all NWL ASA 1 and 2 inpatient cases, excluding spinal and joint revisions. The day case and ASA 3, 4 and 5 cases plus spinal and joint revisions will be treated as currently and are not part of the service change.

4.3 Economic appraisal of service options

At the time of the OBC being drafted (May 2022), economic and financial modelling was carried out using London North West University Healthcare NHS Trust Central Middlesex Hospital. Following conclusion of the public consultation and DMBC, option 5 (LNWH Orthopaedic day cases and inpatients + all NWL Orthopaedic Inpatients) has now been selected as the preferred option. The economic appraisal analysis was refreshed as part of the FBC development, validating this service option selection.

The results of the economic appraisal showed Option 5 has the most positive Net Present Value (NPV) of the shortlisted model of care options, making it the most financially attractive option with the highest cash inflows over time compared to cash outflows. This is a result of this option achieving the optimal balance between efficiency gains and activity, income and costs associated with each incremental increase in activity within the EOC for each shortlisted option.

Capital investment and costs
The appraisal shows a capital requirement of £9.412m for the preferred option.

Table 10 - Capital expenditure by option

Option	Name of option	Total £m
Option One - Base Case	Do Nothing (LNWH)	0
Option Four	LNWH DC & IP + NWL Hips & Knees	(4,995)
Option Five - Preferred Option	LNWH DC & IP + NWL IP	(9,412)
Option Six	LNWH DC & IP + NWL DC & IP	(18,247)
Option Seven	LNWH DC & IP + NWL IP & DC + NHS IP & DC Cases Treated Privately	(22,664)

The cost of capital was treated consistently for all 5 options presented. If considering solely the cost of investment, Option 7 would need the greatest level of capital funding, with Do nothing requiring no investment. This should be looked at in the context of which option could deliver the best ROI.

A provision has been made to cover stranded costs for the three referring entities during the mobilisation year. This was based on a 6-month relief of overhead costs as communicated by the home trusts to allow for a period of adjustment while the space is repurposed.

Stage 4 design plans for the preferred option have now been through the tender process, confirming the £9.412m capital estimate in the OBC is correct. OBC costing included a 23% optimism bias. As LNWH now has a fixed price offer for the construction works needed, this has been reduced to 12% (5% general continency and 7% optimism bias). This is still a heightened provision as c. 5% is usually applied.

Net Present Value calculations
Cashflow calculations using a discount factor of 10% over 25 years show option 5 generates the best increase in discounted cashflow over the appraisal period of £35.510m, with the next best option (option 6) being 45% lower.

Table 11 - Economic appraisal summary for shortlisted service options showing the NPV

Option	Description	NPV (25 yrs.) £m
Option One - Base Case	Do Nothing (LNWH)	(23.474)
Option Four	LNWH DC & IP + NWL Hips & Knees	3.015
Option Five	LNWH DC & IP + NWL IP	35.510
Option Six	LNWH DC & IP + NWL DC & IP	21.531
Option Seven	LNWH DC & IP + NWL IP & DC + NHS IP & DC Cases Treated Privately	19.609

Using the discounted cashflow over a 25-year period as the measure of return, the return on investment (ROI) is determined by taking the incremental financial cashflow of quantified benefits as a proportion of the initial capital investment made. For the preferred option, this is calculated by taking the return of £35.510m over the initial investment of £9.412m generating a ratio of 3.8:1. This is relatively high and close to the Treasury target ROI for public sector capital investment. This indicates that, over the term of the reported cashflow, the initial investment will be recovered nearly 4 times over. The payback period is 2 year and 357 days from day one of mobilisation.

Impact on income and expenditure
The impact of each option on the income and expenditure position is shown below.

Table 12 - Income and expenditure position by year by option

Option	Year 1 (£m)	Year 2 (£m)	Year 3 (£m)	Year 4 (£m)	Year 5 (£m)	Total (£m)
Option one – Base case	(2.047)	(2.111)	(2.209)	(2.327)	(2.449)	(11.143)
Option four	(1.973)	689	709	700	685	810
Option five	140	3.968	4.159	4.323	4.464	17.054
Option six	(2.226)	2.210	2.255	2.250	2.234	6.723
Option seven	(2.105)	1.922	3.066	3.084	3.089	9.057

Over the initial 5-year term, Option 5 presented the most positive improvement in income and expenditure position, contributing £17.054m over a 5-year period with Do nothing representing a future deterioration of £11.143m over the same period (based on London North West existing caseload).

Table 13 - Income and Expenditure position for the preferred option

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
	2023/24	2024/25	2025/26	2026/27	2027/28	
	£m	£m	£m	£m	£m	£m
Income	18.906	31.613	32.742	33.917	35.097	152.275
Expenditure	(18.766)	(27.645)	(28.583)	(29.594)	(30.632)	(135.220)
Surplus/(Deficit)	140	3.968	4.159	4.323	4.464	17.054

In conclusion, the economic appraisal showed Option 5 to be the preferred care model option. Of the care model options assessed, Option 5 had the most positive NPV, generated the best increase in discounted cash flow, the most positive improvement in income and expenditure position and the best return on investment.

Identification of the preferred option
The modelling also shows the preferred option enabling a significant increase in the volume of elective orthopaedic surgery undertaken in NWL. For example, for the hospital option modelled, this includes an additional 3,500 procedures annually based on current cases per session.

The starting month is November 2023 and activity has been modelled based on the ramp up over the initial 5 quarters as detailed below (aligned to the NWL Operating Plan principles) with GLA growth modelled between 2025-29. Beyond 2029, growth is capped from 2029 as bed capacity is exhausted.

Table 14 - Activity phasing by quarter

Period	Scenario Description
23/24 – Q1	109% LNWH 2019 (no population growth)
23/24 – Q2	109% LNWH 2019 (no population growth)
23/24 – Q3	109% LNWH (no population growth) + 75% sector 2019 (+ sector target growth of 109%)
23/24 – Q4	109% LNWH (no population growth) + 109% sector 2019
24/25 – Q1	110% LNWH (no population growth) + 110% sector 2019

NHS pay rates have been assumed for the workforce models needed to service the intended activity model and these have been costing including on costs, enhancements with 15% of posts assumed to be filled with temporary staffing (10% Bank and 5% Agency).

For Inpatient cases being referred into the centre, revisions and patients with an ASA score of 3 or above have been excluded from scope.

To gauge the financial reward potential of each of the finance statements, it is important that the three key financial statements are considered as in the Finance Case. Namely, these are the Income and Expenditure Statement, Impact on the Trust's Balance Sheet (Capital ask) and the discounted cash flow position.

More details on the analysis behind the economic appraisal of the service options can be seen in appendix 1.

Risk analysis
As a detailed level of care has been undertaken when financially appraising the case supported by the DMBC approval stage gate, the cost consequences and risk mitigations are balanced out with supporting sensitivity analysis (section 6.7) testing any material areas of risk.

4.4 Wider economic benefits

Societal benefits
Societal benefit is one which is quantifiable in monetary terms, but for which the benefit is realised by society outside of the health economy. For example, helping someone to recover from ill health and return to work earlier than otherwise, increases economic activity but does not impact the health service. Quality adjusted life years (QALYs) are a common example of societal benefits arising from health care investments. One QALY equates to one year in perfect health.

Table 15 - Societal benefits

Benefit description	Calculation of benefit	Assumptions made	Total economic value (Year 1)	Total economic value (Year 2)	Total economic value (Year 3)
Impact to a patient's long term quality of life as a consequence of fewer readmissions	6 months faster recovery (X) The number of patients impacted (X) Quality of Additional Life Years	QALY value - £19,802 Improvement in readmission rate – 3% 6 month delay in recovery if needing readmission	£419,529	£1,066,961	£1,084,033
Impact to a patients long term quality of life as a consequence of faster access to treatment	Predicted fall in Waiting Times (3 - 5 Weeks) (X) The number of patients impacted (X) Quality of	QALY value - £19,802 Reduced waiting list – 3 weeks	£2,603,118	£6,620,342	£6,726,267

	Additional Life Years				
Reduction in patient sick days from employment as a consequence of faster access to treatment	Predicted fall in Waiting Times (3 - 5 Weeks) (X) Employment Rate (NWL Specific Employment Rate) The number of patient impacted (X) Average Salary in NWL (X) MSK Reason - Not Working (X) Proportion of ASA 1 & 2 patients who are aged 16 to 65	Reduced waiting list – 3 weeks NWL Employment Rate – 57.56% Average NWL Salary - £26,113 ASA 1&2 patients – 69.1% % Sickness (London) – 1.40% % Sickness for MSK – 13.40%	£2,562	£6,516	£6,620
Reduction in patients who need unemployment support and can return to economic activity as a consequence of faster access to treatment	Predicted fall in Waiting Times (3 - 5 Weeks) (X) NWL Employment Rate (X) Average Salary in NWL (+) Universal Credit (X) MSK Reason - Not Working (X) Proportion of ASA 1 & 2 patients who are aged 16 to 65	Reduced waiting list – 3 weeks NWL Economic Inactivity – 21.1% Inactivity due to ill health – 28.4% MSK the cause of ill health – 40.6% Average NWL Salary - £26,113 Universal Credit - £4,018 ASA 1&2 patients – 69.1%	£66,509	£169,150	£171,856
Economic impact on local spending	Average price of a hot beverage (X) Number of Patients + 1 Visitor	Average price of a major coffee supplier - £3.69	£16,816	£42,767	£43,451
Increased cost of carbon emissions for increased travel to care	% Patients that use a car (X) Average miles travel increase to EOC (X) Average Car Carbon Emission (X) Carbon Cost per Ton (X) ULEZ impact	Patients that use a car to travel to hospital – 77% Average additional miles – 3.53 Average car carbon emissions – 404g of CO2 per mile Carbon cost per tonne - £83.03	£ (83.17)	£ (211.52)	£ (214.90)

	Reduction in emissions due to ULEZ – 5%			
	Total	£3,108,452	£7,905,525	£8,032,013

The total sum of economic value at Year 3 is c. £8 million.

Table 16 - Activity assumptions to support societal benefits

Year	Activity
1	39.3% during mobilisation
2	100%
3	101.6%

More detail on the quantification of societal benefits can be found in appendices 2 and 3.

4.4.1 Impact of Societal Benefits on Return on Investment

Alongside the traditional financial measures appraised through the development of the financial statements, it is important that we consider the wider economic financial implications that have been tested through the evaluation of the wider societal impacts.

When we consider financially quantified benefits from both these assessments, the net present value over a 25-year term of the business case increases from £35.510m to £52.771m. Based on this assessment, provides us with an economic return on investment of 5.6 times (in that the net present value covers the £9.412m cost of investment 5.6 times over).

4.5 The preferred service option

The evaluation therefore finds care pathway Option 5 to be the preferred option, from both a clinical and economic standpoint, on the basis that:

- the economic evaluation supports care pathway Option 5.
- access options are most optimal of the shortlisted sites, for both private and public transport.
- the expansion of theatres is within the current footprint of the preferred site and does not disrupt current services or create any planning challenges.
- the bed capacity for the EOC is already in situ.
- the EOC ring-fences elective orthopaedic beds throughout the year to create winter resilience, and has suitable infrastructure for orthopaedic surgery, for example, laminar flow theatres.
- PTL is standardised, enabling equitable access and reducing pockets of unwarranted variation.
- GIRFT expectations and targets are met.

4.6 Summary of clinical model

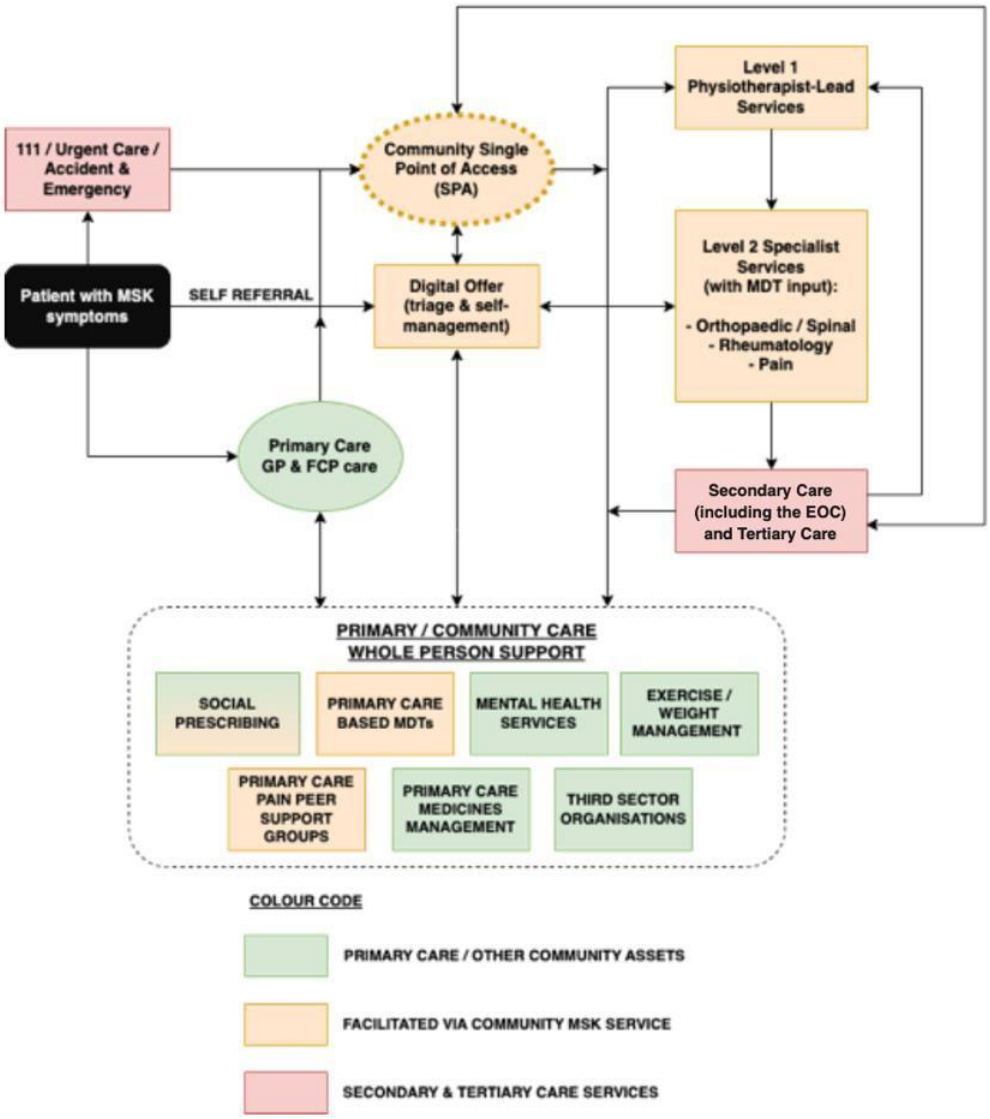
Based on the preferred option, clinical leads from across the NWL acute trusts have worked in collaboration to develop a clinical strategy for elective orthopaedic surgery. This clinical strategy underpins the expected benefits from the MSK pathway and sets out the clinical ambition to provide a centre of excellence for elective orthopaedic surgery (see appendix 4).

4.6.1 The MSK pathway

The MSK pathway will provide the overarching pathway within which the EOC will operate. The MSK pathway will be clinically and digitally integrated service, with strong relationships between primary care, secondary care, community services and third sector voluntary organisations. With a single point of access, the most appropriate community-based treatment to be offered is based on clinical need but, where secondary care intervention is required, onward referral is integrated and seamless to ensure efficient use of secondary care and improved patient experience. There will be outreach to under-served communities to target unmet need and monitor the end-to-end pathway to better understand where patients are hesitant to present or likely to drop out.

This pathway has been developed in line with national guidance including from NICE[4], NHSE BestMSK[5], GIRFT[6] and NHS Evidence Based Interventions[7]. It has also incorporated locally agreed pathways[8] informed by local needs and services. The end-to-end MSK pathway intends to treat a range of MSK conditions with exclusion criteria including under 16s; those not registered with a GP in NWL ICS; non-MSK podiatry; and NHS England specialist commissioning services.

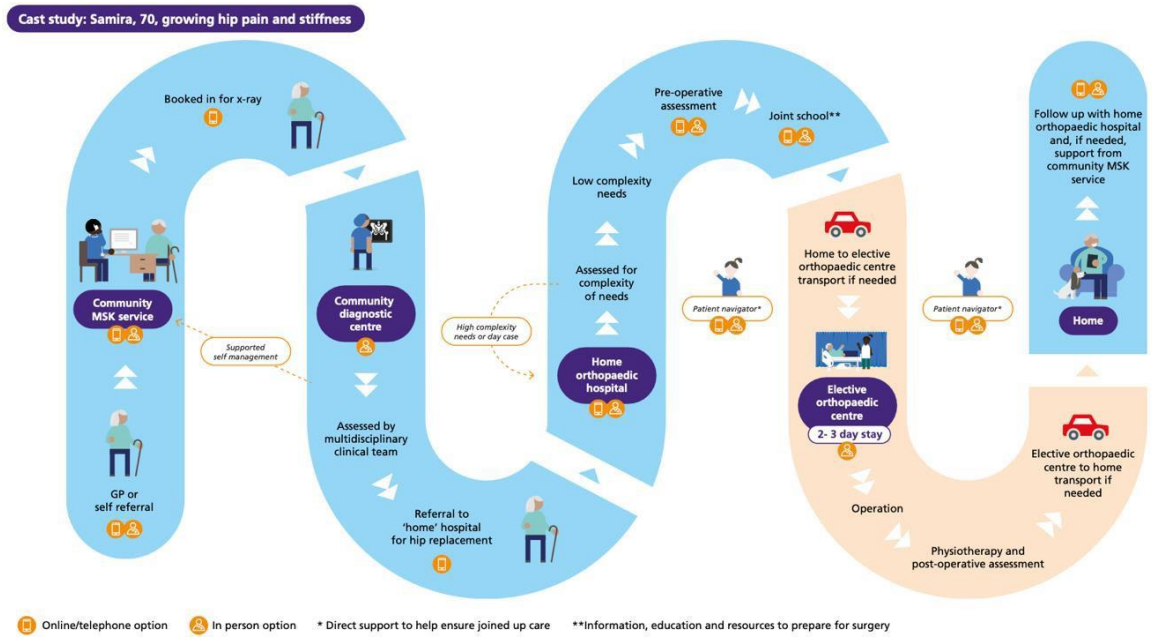
Figure 1 - NWL MSK pathway



To outline how the pathway would work in practice, see Figure 2 for a case study about Samira and her journey through the MSK pathway and the EOC.

[4] https://www.nice.org.uk/guidance/conditions-and-diseases/musculoskeletal-conditions
[5] https://future.nhs.uk/NationalMSKHealth/groupHome
[6] https://gettingitrightfirsttime.co.uk/workstreams/
[7] https://www.england.nhs.uk/evidence-based-interventions/
[8] https://www.nwlondonics.nhs.uk

Figure 2 - Case study of how the EOC will work within an overall improved MSK pathway



4.6.2 The elective orthopaedic clinical model

As a centre of excellence, the NWL EOC will coordinate care planning from local pre-operative care through to local post-discharge rehabilitation and follow-up. Patients will benefit from early assessment of their needs virtually or close to home in the community. If surgery is required, they will be guided to the surgical service that can best meet their needs. If they are broadly well (ASA 1 or 2[9]) and require a routine inpatient procedure (such as a hip replacement), they will be able to have their surgery at the EOC.

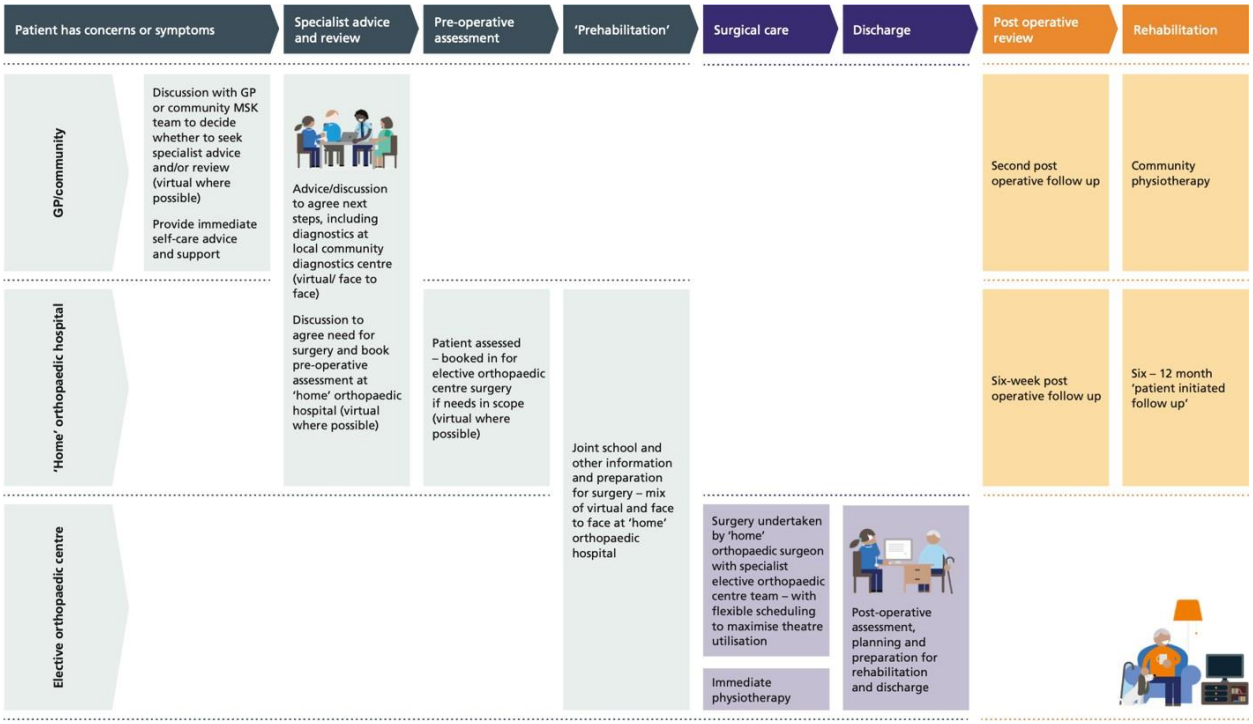
Patients who have additional health risks will be offered surgery in whichever of the NWL hospitals that currently provides orthopaedic surgical care is suitable for their needs, usually their home hospital. Whichever surgical service they access, their end-to-end surgical care will remain under the same surgical team based at their 'home' orthopaedic hospital to help ensure a seamless experience. If they have their surgery at the EOC, their 'home' surgical team will rotate to the new centre as well, supported by the centre's permanent support team.

The EOC will bring together the low complexity, inpatient, orthopaedic surgery for NWL in a purpose-designed centre of excellence, separate from emergency care services. This means that:

- patients will have faster and fairer access to surgery, with less chance of postponement due to emergency care pressures elsewhere.
- the care they have will be of a consistently high quality, benefitting from latest best practice and research insights and a clinical team who are highly skilled in their procedure.
- the centre will be extremely efficient, enabling more patients to be treated at a lower cost per surgery.
- patients will have better outcomes, experience, and follow-up.
- In addition, capacity is created in the 'home' orthopaedic hospitals by the consolidation of low complexity surgery in the EOC and this capacity will be available to be used for surgical patients who have more complex needs and for other specialties.

[9] https://www.asahq.org/standards-and-guidelines/asa-physical-status-classification-system

Figure 3 - Case study of the NWL EOC clinical model



Further details on pre-operative assessment, managing deteriorating patients, support on discharge from the EOC, multidisciplinary team and clinical support services, equity of care for patients not treated at the EOC, and avoiding digital exclusion can be found in the DMBC[10] (a link to which can be found in the bibliography in appendix 5). Further detail on the clinical model as a whole can be found in the Clinical Strategy drafted by the Clinical Cabinet (appendix 4).

4.7 Site selection – long list appraisal

A clinical workshop was held in August 2022 to define the essential criteria for the location of the EOC (from a clinical perspective) and shortlist the options, as well as to build out the desirable criteria of the centre.

Table 17 - Evaluation criteria developed at clinical workshop

Essential Criteria	Desirable Criteria
• Be accessible to our NWL community and those that need care – with a mix of virtual and face to face depending on need – keep options open for those who are not digitally enabled. • Suitable infrastructure for orthopaedic surgery, for example, laminar flow theatres – needs to also cover workforce, which must be identifiably NWL workforce. • Must cover end-to-end sharing of information, enable good communication and seamless care – for example, pre-op assessment through to post-op pathway – and with robust discharge arrangements. • Deliver a shared care record for our patients.	• Short travel time for patients and staff. • Create a good track record of outcomes to build momentum. • Create an environment and infrastructure for better training and leveraging technology and innovation – for example, robotics. • Be attractive for commercial partners to increase sustainability. • Reduce cost of outsourcing to independent providers. • Good patient transport options, and public transport access for staff and patients.

[10] https://www.nwl-acute-provider-collaborative.nhs.uk/-/media/website/nwl-acute-provider-collaborative/documents/nwl-eoc-consultation/1459-dmbc-report-v19.pdf?rev=aec2c2b4463d40459dc3cd741d8b52d2

- Standardisation of PTL – enables equitable access and reduces pockets of unwarranted variation.
- Must be staffed through local workforce.
- Facilities on-site are interdependent.
- Must be 'neutral territory' – which is seen as a system asset, not part of one of the organisations.
- Ability to ring-fence elective orthopaedic beds throughout the year to create winter resilience.
- Meet the needs of the NWL community and case mix.
- Capacity to expand in future if demand increases.
- Delivers on GIRFT expectations, for example, six day a week access to high quality care.

The following 10 options were identified for the clinical evaluation (that is, the nine hospitals offering orthopaedic inpatient surgery in NWL ICS, and two other hospitals in NWL not offering inpatient surgery – Ealing Hospital and Hammersmith Hospital):

1. Central Middlesex Hospital
2. Charing Cross Hospital
3. Chelsea and Westminster Hospital
4. Ealing Hospital
5. Hammersmith Hospital
6. Hillingdon Hospital
7. Mount Vernon Hospital
8. Northwick Park Hospital
9. St. Mary's Hospital
10. West Middlesex Hospital

NWL is committed to an open and transparent process and has taken a balanced scorecard approach to the requirements for the EOC site or sites in assessing the longlist of potential sites and identify those that are clinically suitable.

We assessed the longlist options, as outlined in the table below. All but two sites (CMH and MVH) were ruled out as they did not meet the clinical criteria, particularly concerning the ability to ring-fence beds for elective capacity. The findings from the shortlisting exercise align with the pre-consultation feedback obtained.

Table 18 - Results of the site option shortlisting process, with scores reached through consensus discussion at the workshop in August 2022

Options	Essential requirements met?	Desirable requirements met?	Align with site strategy?	Level of disruption to create EOC on existing services	Key risks/other considerations
Key	Yes currently / Could be met in future / No		Yes/No	Low/Medium/ High	
Central Middlesex Hospital	✓	✓	✓	Low	Been part of site strategy for a while and disruption will be minimal – formation of an EOC would not displace the current patient flow

Charing Cross Hospital	X (ring-fencing)	Could be met in future	X	High	Not ring-fencing throughout the year – can ring-fence current volume but not EOC volume (as many acute specialties). Co-location with critical care bed base – EOC will have an impact on that bed base
Chelsea and Westminster Hospital	X (ring-fencing)	Could be met in future	X	High (for non-elective services)	
Ealing Hospital	X	X	X	High	
Hammersmith Hospital	Could be met in future	Good geographic location	X	High (due to other spec. services)	The site has lots of specialised services (for example, cardiac and renal) with specific requirements, and not looking to be developed. The site is also not currently suitable (that is, laminar theatres)
Hillingdon Hospital	X	X	X	High	Will be disruption to manage if this is not selected as a key site.
Mount Vernon Hospital	✓	Difficulties with access (travel time)	✓ (for current capacity)	Low (for current capacity)	Cannot take on additional capacity than it is currently handling
Northwick Park Hospital	X	X	X	High	Would have to knock down buildings
St. Mary's Hospital	X	X	X	High	Co-location with critical care bed base – EOC will have an impact on that bed base
West Middlesex Hospital	X (ring-fencing)	Could be met in future – not close to public transport	X	High (for non-elective services)	
Novel site(s) (for example, Westfield Shopping Centre)	Could be met in future	Potentially good transport options	N/A	High	Not many previous NHS sites to use. St Charles – not for this clinical infrastructure

4.7.1 The site shortlist

The site shortlist consisted of CMH and MVH. As shown by the scoring above, both CMH and MVH are already well-established providers of elective orthopaedic care and protected from emergency and urgent care surges. Both sites have laminar flow theatres of high quality. For example, CMH has the BeCAD theatre suite with 3 laminar flow theatres and available beds in situ, and MVH has a modern diagnostic and treatment centre. CMH and MVH both have the requisite clinical and non-clinical adjacencies available for the patient group, with an opportunity to co-locate the theatre suite with the inpatient care.

4.8 Site selection – short list appraisal

As the clinical requirements had identified two appropriate sites for the EOC, a set of non-clinical lenses has been applied to determine which should be taken forward as options for the EOC.

Access to sites

Analysis was conducted on the average time to travel to the hospital sites that currently provide 'routine' orthopaedic surgery and other sites from all parts of the sector. Distances were measured from lower layer super output areas (LSOAs), which are small geographical areas of approximately the same population size to provide a fairer unit of comparison than boroughs which vary in size.

As can be seen from the figures below, MVH has greater mean travel times for both public and private transport, nearly double the average travel time compared to CMH. Analysis also showed that the CMH site provides an improvement in travel times for the most deprived LSOAs. MVH was also scored very poorly for accessibility ratings by TfL, although this area is serviced by other providers. MVH would also mean a higher increase in total carbon dioxide emissions than CMH. Off-peak has been used as the EOC will only provide inpatient elective services to ASA 1 and 2 categories, excluding joint revisions and spinal.

Figure 4 - Off-peak driving travel times (private transport) from every NWL LSOA to each site

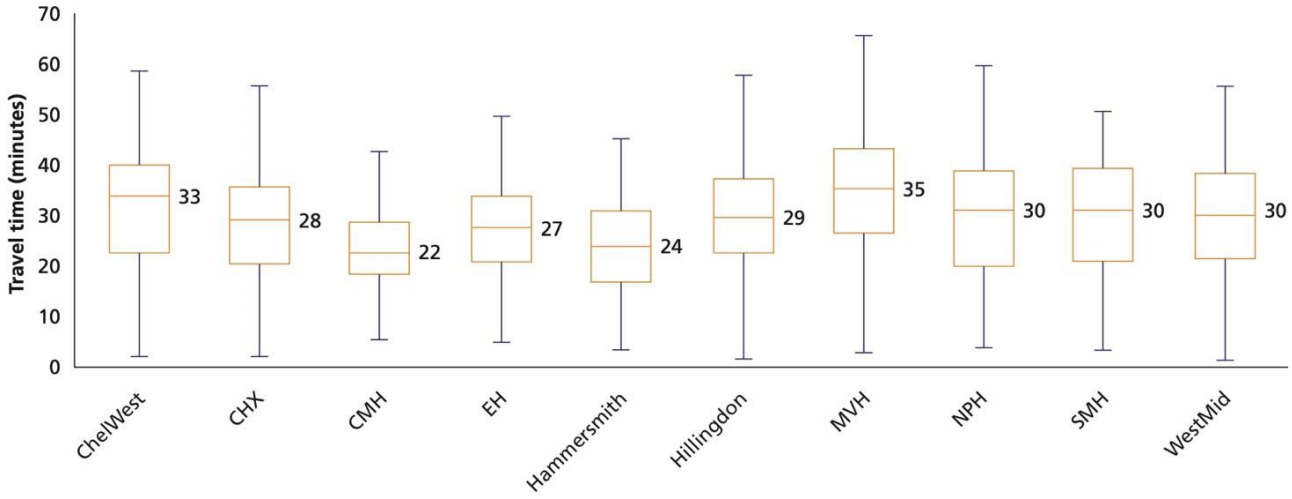
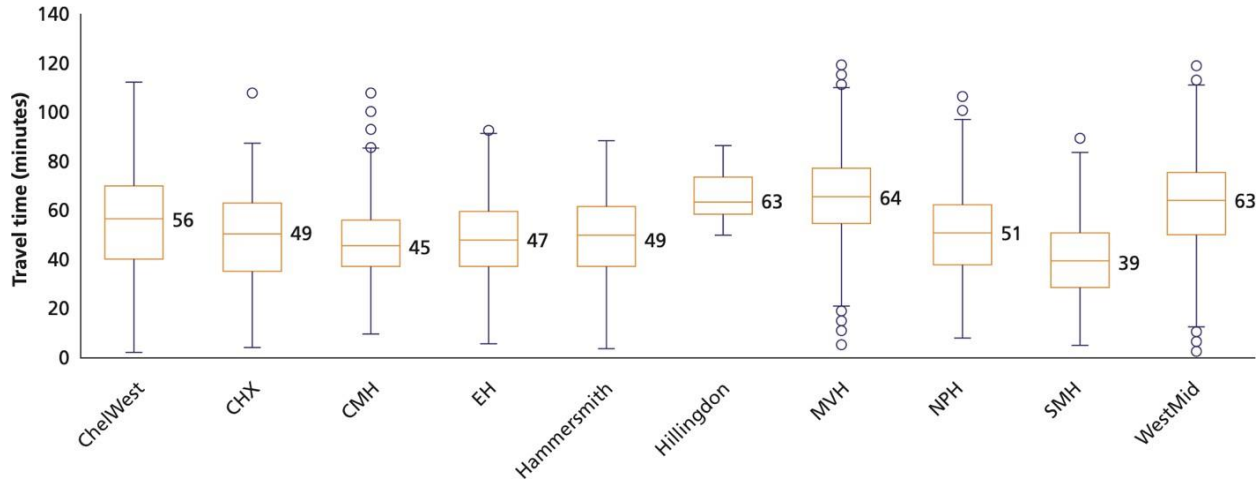


Figure 5 - Off-peak public transport times from NWL LSOA to each site



The CMH site is located in the centre of the NWL ICS. As shown in the analysis above, it offers the shorter travel times relative to other NWL sites.

Capacity

MVH has the capacity to address its current level of activity for ASA 1s and 2s. However, it does not have the infrastructure or the beds to take on the elective orthopaedic activity for all NWL. The Hillingdon

Hospitals NHS Foundation Trust is the only trust in NWL that did not see an increase in admitted waiting lists between April 2022 and August 2022 and is at near maximum capacity, therefore changes to this site would likely result in adverse impacts to waiting times and equality of access and timeliness of treatment.

In contrast, CMH is currently underutilised with 50% bed occupancy, so would not require the same theatre and bed capacity expansion to operate as the EOC.

Estates
CMH is a high-quality clinical estate which has a surplus of bed capacity available for use. It is also anchored within the Old Oak Common Redevelopment area contributing to the socio-economic development of the area. The expansion of theatres is within the current footprint and does not disrupt current services or create any planning challenges and the bed capacity for the EOC is already in situ.

A more extensive expansion would be potentially needed to host the EOC at MVH. As set out in the THHT Estates Strategy[11], planning permission at MVH is likely to be difficult to secure due to the planning designations for the site and the estate has significant challenges, including backlog maintenance and poor condition.

4.8.1 Two-site option

We have explored the feasibility of having two EOCs to respond to the consultation feedback, particularly from Hillingdon. In practice, due to the capacity constraints at MVH, this would mean it would have to maintain its current levels of activity, therefore capacity to cover patients who do not currently use MVH and the scope of the EOC would be reduced.

A dual site option would also make it significantly harder to reduce the unwarranted clinical variation and would make it difficult for MVH to improve its current quality and operational performance levels. For instance, the South West London EOC has more than 40 clinicians from their 4 participating trusts who all work to the same pathways and productivity standards. Additionally, the volume of patients going through the EOC would be lower, which would make it harder to achieve the reduction in the waiting list set out in the case for change.

From a workforce perspective, a two-centre approach would mean duplication of some specialist roles across two sites, meaning it would be harder to achieve safe nursing ratios and there would need to be higher investment in site management. Resilience to absorb vacancies and build a 'surgical hub' identity and culture would also be negatively impacted.

Recent data shows that trainees and training in trauma and orthopaedic surgery have been disproportionately affected by the covid-19 pandemic and reduced elective surgery volume. EOC will offer an important solution for this problem in NWL and will provide future trainees with high volume training in a supervised high volume performance environment. Splitting across two sites would diminish this opportunity for NWL.

4.9 Preferred site option

In the public consultation, there was less support for the EOC to be located at Central Middlesex Hospital, primarily due to travel concerns. Some people, primarily staff and stakeholders in Hillingdon, would prefer the centre to be located at Mount Vernon Hospital.

To respond to this feedback, we reviewed our assumptions for the site options appraisal and check the validity of our preferred location. Central Middlesex continues to score highest against clinical criteria, has the shortest median travel time by car and by public transport and meets a higher number of desirable criteria. This has reconfirmed the assessment that CMH would be the best choice of site to host the EOC.

[11] https://www.thh.nhs.uk/documents/_Publications/strategy-docs/THH_Esates_Strategy_Feb_2022.pdf

We have therefore designed a robust travel solution that will provide support to any patients facing a long, complex, or costly journey to the EOC, detailed in the following section.

4.10 Transport solution to support the preferred option

The concerns raised by patients, staff, and stakeholders over the course of public consultation were considered alongside a review of key recent publications on patient transport (which highlighted that long or costly patient journeys can be a significant barrier to care). The key areas of concern raised within the public consultation were around travel times, journey complexity and costs. These areas correlate closely with the findings of an extensive review completed by Age UK in 2018 which showed older people encountered several challenges when travelling to hospital that included long and uncomfortable public transport journeys and cost[12].

Healthwatch UK also surveyed patients, commissioners, and charity organisations on their experience of patient travel to and from NHS services[13]. The outcomes of this further echoed the concerns raised and provided valuable insight into how patients travel to appointments (although it is important to note that the patients travelling to the EOC are not likely to need to attend repeatedly). Alongside national best practice and recommendations, the arrangements at neighbouring EOCs were also assessed. Feedback from these centres demonstrated that the challenge faced by patients travelling longer distances had been recognised and support had been put in place to help patients travel.

The reviews recommended that best practice was to provide patients with information and assistance on how to plan and book their independent journey, access to healthcare travel cost schemes and local community resources. These recommendations correlated strongly with the feedback received from patients and staff during the public consultation process.

4.10.1 Eligibility Criteria

NHS England and NHS Improvement formally commissioned a national review into non-emergency patient transport services (NEPTS) that concluded in 2021 with an update to patient eligibility criteria and key recommendations published in 2022[14].

This was based on the overarching principle that most people should travel to and from hospital independently by private or public transport, with the help of relatives or friends if necessary, and NHS-funded patient transportation is reserved for when it is considered essential to ensuring an individual's safety, safe mobilisation, condition management or recovery.

Patients should be encouraged to make independent journeys where possible (with the provider informing on local transport options) and be made aware of the existence of and eligibility criteria for other sources of travel support, including Healthcare Travel Costs Scheme (HTCS) and the Disability Living Allowance (DLA) mobility component. Moreover, only patients who have been referred by a doctor, dentist or ophthalmic practitioner for non- primary care NHS-funded healthcare services or are being discharged from NHS-funded treatment are considered for eligibility for NEPTS.

Patients must meet one or more of the following criteria to qualify for NEPTS:

a) Have a medical need for transport support (such as requiring specialised equipment or monitoring during the journey).
b) Have a cognitive or sensory impairment requiring the oversight of a member of a specialist or non-specialist patient transport staff or a suitably trained driver.
c) Have a significant mobility need that means they are unable to make their own way with escorts or carers whether by private transport (including a specially adapted vehicle if appropriate for the journey), public transport or a taxi.
d) Are travelling to or returning from in-centre haemodialysis, in which case specialist transport, non-specialist transport or upfront/reimbursement costs for private travel will be made available.

[12] https://www.ageuk.org.uk/our-impact/campaigning/painful-journeys/
[13] https://www.england.nhs.uk/urgent-emergency-care/improving-ambulance-services/nepts-review/
[14] https://www.england.nhs.uk/wp-content/uploads/2022/05/B1244-nepts-eligibility-criteria.pdf

e) A safeguarding concern has been raised by any relevant professional involved in a patient's life, in relation to the patient travelling independently.
f) Have wider mobility or medical needs that have resulted in treatment or discharge being missed or severely delayed.

Patients are only able to travel with escorts or carers if they are under 16 years of age, need the escort's particular skills or support, cannot be left alone or are under the care of the patient who is eligible for NEPTS.

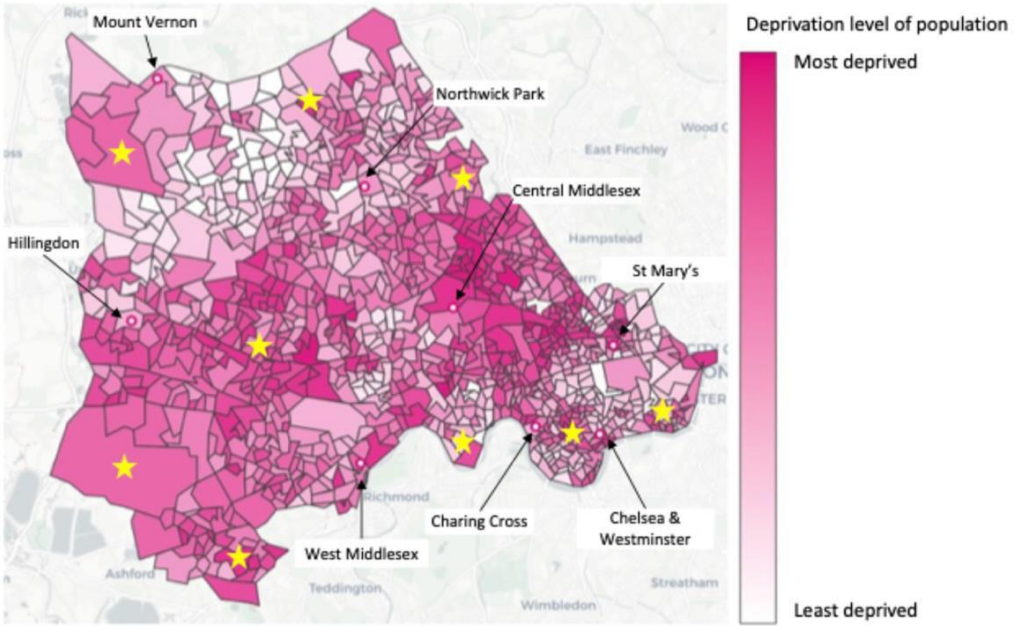
These criteria included consideration of a patient's wider mobility needs and suggested that local systems may wish to add further criteria when determining eligibility for non-emergency patient transport that included consideration of long distances to travel, high cost associated with travel by taxi, and limited or complex public transport options.

An authorised eligibility assessor, whose role will be locally defined, will provide a judgement on whether any other transport is suitable or available. Other transport options, such as the patient's own transport, support from relatives or carers, and transport people are entitled to as part of funded social care provision or a social security benefit, should be exhausted before NEPTS is provided.

4.10.2 New Travel Analysis

The feedback received through public consultation cited that reviewing only median travel times was not a fair measure as there were likely to be cohorts of patients who experienced very long and complex journeys. On this basis, ten archetype journeys were developed that modelled a journey that was over 45 minutes in time and from a lower layer super output area with high level of deprivation. These archetype journeys provide insight into the difference in time, complexity and cost that patients may encounter when travelling to CMH as opposed to their home hospital.

Figure 6 - LSOA map showing the 10 archetypes identified to demonstrate all areas covered LSOA population deprivation level heatmap for all ages (two journeys are mapped for Hammersmith and Fulham)



The analysis showed the current journey to the home hospital and compared this to the journey to CMH for ten different scenarios across NWL.

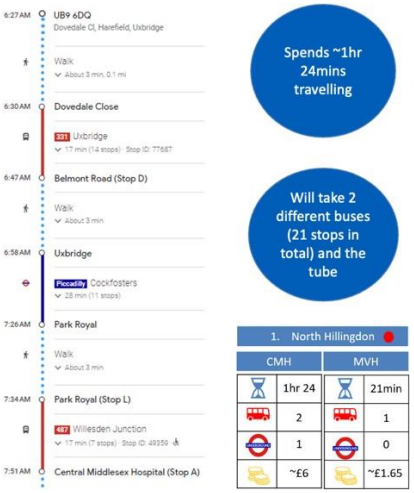
Figure 7 - Patient journey mapping example

Scenario: Jane lives in the north of Hillingdon, she would have previously received treatment at Mount Vernon Hospital. Jane is now required to travel to Central Middlesex Hospital, she will travel on the day of surgery, so will be adhering to pre-surgical fasting requirements.

Jane requires low complexity routine orthopaedic surgery AND:

- Does not meet the eligibility criteria for NHS funded patient transport
- Is not able to arrange private transport for herself such as a taxi or a lift from friends/family
- Does not qualify for or have access to community transport or the health travel reimbursement scheme

Jane plans to travel by public transport to Central Middlesex Hospital, aiming to arrive before 8am, she sets the parameters to include reduced walking times to ease the journey.



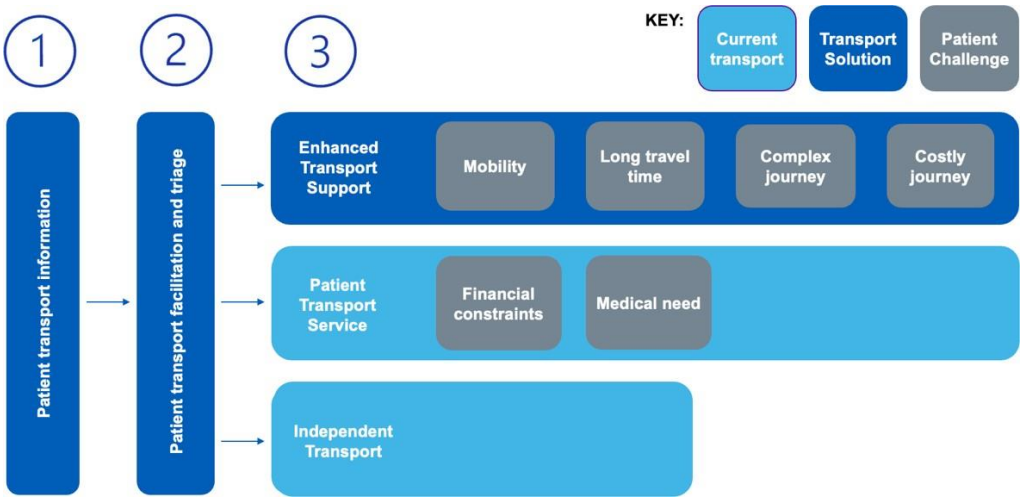
The analysis highlighted the areas in NWL for which a journey to CMH would be considerably longer, more complex and more costly than patients' current journeys. Further analysis of the profile of patients across the sector approximated the number of patients residing in the identified areas who would most likely encounter a complex or costly journey if travelling by public transport.

The analysis showed that following the implementation of a risk assessment and triage process that considered travel time, complexity, and cost, approximately 25% of NWL patients attending the EOC could qualify for support with their travel arrangements, given that approximately 1,300 out of 5,175 patients (instead of the current 240, typically from Ealing, Harrow and Brent) would have to undergo long journeys. Under the revised criteria, a further 5% of patients would incur long, complex, or costly journeys and be eligible for support.

4.10.3 The proposed transport solution

The solution has been designed with best practice recommendations from national reviews and public consultation suggestions as the basis for identifying a resolution. It is best considered as a three-step approach that will provide patients and their families with the level of support that they need to access care effectively at the EOC. The solution includes providing information and signposting to available resources, facilitation for all patients and carers and transport for those who require it. The inclusion of additional eligibility criteria in line with national review outcomes will enable patients who have mobility challenges and have a long, complex journey on public transport or prohibitive costs to access patient transport. The solution is outlined below in more detail.

Figure 8 - The proposed transport approach includes facilitation and triage for patients and carers, with enhanced support when needed



Step 1: Information – all patients

The first step is to provide all patients travelling to the EOC with up-to-date information on transportation to CMH. This will include information for those travelling independently by car or taxi in terms of directions, parking and drop-off locations. There will also be information available that signposts patients to financial resources and support available through national schemes such as the Healthcare Travel Cost Scheme and community services.

Step 2: Facilitation – all patients

The second element of support builds on the information provided and supplements this with facilitation support. This will enable patients to plan their journey effectively with a member of staff who can advise and signpost patients to national and local support schemes and will assess if a patient will encounter a long, complex or costly journey if they are considering travelling by public transport.

Step 3: Patient Transport provision for eligible patients

For patients who are unable to travel to or from the EOC for treatment independently or through support from national schemes and who will encounter a long, complex or costly journey by public transport, typically a car ambulance or taxi will be provided. This will ensure that patients can access care at the EOC from across NWL in a fair and equitable manner.

We aim to offer transport information and facilitation support to all patients attending the EOC. Patients will be able to access information digitally where they prefer to, or their transport support options will be explained to them by the care navigator team. This will include asking patients how they are planning to travel to the EOC and, if required, providing patients and carers with information on where CMH is located, how best to travel there from home, and information on support such as the Healthcare Travel Cost Scheme. If, on assessment, patients can't rely on friends or family for support with getting to their appointment and they have mobility challenges or live at a distance that would require them to navigate a long, complex journey on public transport that may be costly, travel support will be booked to and from the centre at no charge.

The implementation and ongoing co-design of this transport solution including the formation of a transport working group is detailed in section 7.8.

5 Commercial case

Summary
Chapter 5 sets out the commercial case and describes the process followed and the associated requirements to enable selection of the construction partner.

Key messages

- The proposal for a the NWL EOC will make use of high-quality estates at CMH, whilst also achieving compliance with national guidance for NHS hospital developments and aspiring to achieve strong BREEAM performance, contributing to Net Zero Carbon and utilising Modern Methods of Construction where appropriate.
- The preferred procurement strategy is the Variation Process to the CMH PFI Project Agreement.
- The Tender Report, produced by PFI Project Co, recommends the tender submitted by bidder 1 and this is endorsed by both PFI Project Co and LNWH Trust Estates & Facilities team.
- A comprehensive design process has been undertaken and a full set of RIBA Stage 4 drawings have been produced which have been signed off by the Design Team, including clinical representation. These designs align with HBN requirements and were noted and approved in the Schedule of Derogations.
- Enabling works commenced with approval from the Capital Review Group in January at risk to ensure construction can begin in May 2023.
- There is a clear recognition of the challenges within the construction market, with rapidly increasing costs of building materials and timing of the procurement will need to be carefully addressed to mitigate the risks of locking in these high prices.
- Following approval, construction will occur from 26th May to 16th November 2023.
- The proposed location at CMH will benefit from the absence of any planning issues or need for planning approval, given this is refurbishment scheme with no change to the curtilage of the building.

5.1 Scope of services

5.1.1 Scope of services

The new EOC will be located within the BECaD wing at Central Middlesex Hospital. The project will include:

- Two additional laminar flow theatres.
- An extended First Stage Recovery Unit and.
- Associated works to rehouse support facilities to liberate space for the additional clinical spaces.

The EOC will comprise:

- Three existing Laminar Flow Theatres and their supporting facilities.
- Two New Laminar Flow Theatres and associated facilities.
- Extended Ten Bay First Stage Recovery Unit supporting all five Theatres.
- Inpatient and PACU Beds within existing re-purposed in-patient accommodation.
- Various support facilities within existing re-purposed support accommodation.

The design reflects the Productive Theatre ethos, to be as efficient as possible for the patients and staff who use the building. Service redesign and transformation will be undertaken as part of the implementation plan (see section 7.2) in advance of the new building opening to enable GIRFT top decile performance to be achieved. The investment is predicated on the benefits of creating a new EOC for NWL at CMH which is an Elective Orthopaedic Surgical Centre for NWL[15].

[15] "Determining Guidelines for LNWH Site and Service Configurations, report to London North West University Healthcare Trust Executive Group, 17th March 2021.

5.1.2 Modern Methods of Construction

To the extent possible, Modern Methods of Construction (MMC) will be used. Achievement of these requirements will be determined through the procurement process and finalisation of the construction methodology. Being a refurbishment orientated construction project the opportunity for MMC is naturally limited but wherever component systems can be incorporated these are included for their benefit on cost, quality and on-site build time.

A summary of key commercial arrangements and design standards are provided below:

- Procured through ByCentral Ltd, the PFI Project Co, as a direct and documented Deed of Variation to the original Project Agreement (PA) as executed on 6th November 2003 for the CMH PFI under the requirements and obligations of Schedule 22 of the PA.
- Built on Trust land within the BECaD Wing at Central Middlesex Hospital
- Designed to BREEAM Very Good standard
- Compliant with current HBN/HTM guidance, subject to agreed derogations as listed on the Schedule of Derogation (appendix 6)
- Wherever practicable, the works will be undertaken using Modern Methods of Construction i.e. component systems within M&E plant, infrastructure and service delivery modules. In line with the Government Construction Strategy 2016-2020
- 1:200 and 1:50 drawings along with Room Data Sheets have been signed off by clinicians, senior management, infection control and fire safety representatives at the Trust.
- Fully tendered contract package adjudicated and ready to award.

5.1.3 Net Zero

LNWH embraces the obligations set out on PPN 06/021 in taking Carbon Reduction Plans both into day-to-day operations but also more specifically within the Procurement exercise for the new EOC facility. The design will support the Trust's Net Zero plans as described within LNWH's Green Plan and NWL ICB Green Plan. More specifically the design will seek to achieve a minimum of BREEAM Very Good (matching that of the BECaD Wing) and to be designed/constructed to help the Trust work towards achieving a Net Zero Carbon Estate in so far as possible given the limitation of project that re-purposes an existing structure and footprint.

The Trust is working on a number of Net Zero initiatives for the wider CMH site for which the EOC will benefit. These initiatives are wide and (potentially) ground-breaking; including straightforward investment in LED lighting upgrades, solar PV opportunity assessed at 3% of the site demand for electricity and at the more radical level, collaboration with the Old Oak Park Royal Development Corporation (OPDC – the local Planning Authority and business and enterprise development organisation promoting investment in the locality) in the creation of a District Heating Network whereby the hospital would be supplied by heat that is recovered from local data-centres – this initiative has just been successful in securing Mayor of London funding to further develop the feasibility model and LNWH has offered support of CMH being a potential long-term customer of this heat supply. More detail around the implementation of environmental sustainability.

5.2 Procurement strategy and process

5.2.1 Procurement strategy

The construction works form part of CMH's Private Finance Initiative (PFI). Two strategies for delivery were proposed in the OBC and have been further explored and this FBC sets out the chosen strategy:

- Strategy 1 - Agree a variation to the PFI Project Agreement (PA)
- Strategy 2 - Carve the space out of the PFI and LNWH undertake the works directly.

Both procurement strategies (within or outside of the PFI) necessitate formal legal documentation that draws the works output into the PFI. There are differences in regard to the risk profile, the extent of legal documentation and cost, are much similar whatever procurement choice is made; neither is

straightforward and both are influenced by “Lender nervousness” consequential to the Carilion collapse. This does drive a due diligence that serves both parties well in the long-term.

Strategy 1 – Variation Process to the PFI Project Agreement
The PFI Variation Process that was originally envisaged created within the PA the ability to allow for projects such as the EOC to be undertaken. Through the PA, LNWH will have the ability to directly influence the actions of the PFI in delivering the project itself but also in the context of our wider (and significantly greater) relationship over the Operational Phase of the PFI PA to fulfil our partnership responsibilities.

LNWH is experienced in this process, having previously used the PFI Variation Process in the successful delivery of three prior schemes to time and budget:

- GP Practice conversion of former Rainbow Ward space (c£1.5M, 2018),
- Infrastructure changes to allow Land Sale (c£1M, 2019) and,
- Endoscopy Project (c£4M, 2022).

The value of the EOC construction works will not be seen as a material variation of the original PFI Procurement exercise and as such, any risk of procurement challenge is low.

LNWH is subsequently experienced in managing the PFI Variation Process and has confidence in Strategy 1.

Strategy 2 – LNWH undertake works directly outside the PFI
The second strategy is to work outside of the PFI and LNWH undertake these works. There is a high impact but low probability risk that LNWH carrying out work to a PFI Project Co building could be absorbed back into the PFI with no material consequence to risk profile and wider cost base.

This has been assessed as low probability as PFI Project Co are unlikely to absorb the risk of works undertaken by others. The original PA did absorb the existing ACAD wing into the PFI when new and at the outset of the PFI term; the commercial dynamic is far less in the favour of the building being absorbed now.

If taken as a stand-alone Project, the value of works is close to Procurement thresholds and as such any risk of challenge might be elevated should advertisement follow. Mitigating this risk adds time to the process and can also deter bidders. LNWH has previously experienced this with other trust projects. While not a reason alone to reject this approach, the fact that a viable alternative through the PFI PA exists helps support the commercial case, provided that value for money is achieved.

The procurement method of choice for Strategy 2, would be P23 National Framework (About ProCure23 | Procure22). Under P23, if LNWH elected to undertake the works outside of the PFI, it would duplicate the structure of PFI given the similarities of both arrangements during the construction phase of this work.

The key factor of choice between the two strategies therefore becomes that of delivering “value for money” on the EOC Project specifically. Within P23 the supply chain is appointed by the Principal Supply Chain Partner (PSCP) from their declared resource pool. Under the PFI structure, there is a requirement that works (above £75k index-linked) are procured via an open (traditional) tender process.

It is also worth noting that the lowest threshold of P23 is “up to £20M”; the EOC project is significantly below that threshold and as such, it must be questioned that the level of overhead associated with a P23 project could be excessive for the EOC Project; P23 is focused upon the building of hospitals rather than (in relative terms) minor changes to facilities already built.

Conclusion
These two main factors of process and size lead to the conclusion that “value for money” is achieved via Strategy 1 – Variation to the PFI Project Agreement.

5.2.2 Commercial Relationship with the CMH PFI

The Trust has worked very closely with PFI Project Co on developing the procurement process for the NWL EOC works with a specific focus on achieving value for money. Together the parties were keen to ensure that the “Contractor market” were keen and responsive to the prospect of the tender being issued and thereby likely to respond competitively. The parties were equally mindful of the elevated risk of failure within the Construction marketplace and post-Carillion consequences need little emphasis in this sector.

5.2.3 PFI Project Agreement Schedule 22 – Variation to the Agreement

The original PA expected variation across its thirty-year operational phase Term and includes Schedule 22 as the mechanism for management of such variation.

The requirements of Schedule 22 are such that the Trust makes a proposal for a variation (Variation Enquiry) and the PFI Project Co assesses any grounds for rejection within domains cited in the PA. The PFI Project Co equally assesses any Service Variation (operating impact) that might be consequential to the works too.

The governance of the PFI Project Agreement (PA) is via a Liaison Committee of all parties who meet quarterly and with whom any dispute would be referred to, as and when any discord, might arise.

The PA treats variations under the principle of "no worse (or no better) off as a consequence of the change". This applying as much to the apportionment of risk, as it does to financial recovery; any variation should not impart undue risk, nor equally can one party unduly benefit as a consequence of a Variation.

The Trust and the PFI Project co-operate the procurement of works variations in line with the processes of good Estate and Project Management and Schedule 22 requirements.

LNWH is experienced in the process, having previously used the PFI Variation Process in the successful delivery of prior schemes to time and budget:

- GP Practice conversion of former Rainbow Ward space (c£1.5M, 2018),
- Infrastructure changes to allow Land Sale (c£1M, 2019) and,
- Endoscopy Project (c£4M, 2022).

5.2.4 Tender Process

The procurement of the works follows a traditional industry standard approach that seeks to evaluate the qualitative and quantitative aspects of seeking "best bids" from a pool of interested competent Contractors.

The tender process commenced in January 2023 for one month. To ensure that LNWH achieved “value for money”, one of the Contractors invited to tender was a "known party", having recently undertaken the creation of the Intensive Care Unit at Northwick Park Hospital (NPH) and also works to upgrade Theatres at Northwick Park Hospital. This party provided a benchmark mechanism albeit all decisions are subject to the iterative process of the tender exercise and will be influenced by local and timely factors of market influence.

Adjudication of the Tenders has been undertaken by a joint team of PFI Project Co and Trust Client appraisees who will appraise the submitted documentation based upon both qualitative and quantitative criteria. The qualitative criteria being closely defined including an adequate description of "what good looks like" (see tender report). A joint (LNWH/PFI Project Co) recommendation will be made on the preferred Main Contractor and Tender Value to the EOC Programme Board with an intention to award contracts on 20th April 2023.

While not formally obliged to follow the principles of Social Value, the Trust and PFI Project Co has embraced the objectives of PPN 06/20 and incorporate Social Value within the qualitative scoring criteria being allocated to Social Value in line with that set out in the Procurement Note guidance.

5.2.5 Procurement timeline

Table 19 - Procurement timeline

Milestone	Dates
Instruction to proceed to tender	17th January 2023
Tenders issued	23rd January 2023
Enabling works	23rd January 2023 – 25th May 2023
Tender period	24th January 2023 – 23rd February 2023
Tender return date	23rd February 2023
Tender adjudication and report	24th February 2023 – 28th April 2023
Tender validity (90 days)	24th February 2023 – 24th May 2023
Contract Awards	20th April 2023
Contracts Exchanged	21st April 2023 – 27th April 2023
Contracts and CDM planning period	28th April 2023 – 25th May 2023
Construction works	26th May 2023 – 16th November 2023
Handover & Commission	November 2023

5.2.6 Market and Other External Forces

The decisions related to procurement; timing and process carries a number of commercial caveats for consideration. The marketplace is volatile, with the mixed and aggregated product of Brexit, the COVID-19 pandemic and disturbances in Ukraine all having an effect. The Construction Sector is seeing levels of inflation that were only experienced decades ago and the uncertainty over labour and material supplies further adds to the mix that generates any Tender Sum. It is usual for bids to stay open for 90 days but currently, having a period of one-quarter of a year with assumed inflation can lead to an elevated bid that market forces alone may not control. A shorter period might be preferable (to eliminate any risk premium) but this has to be measured against the certainty of outcome in approval, as referring tenders back for uplift will just multiply likely inflation risk premiums and lead to undue elevated cost.

In managing the process with the PFI Project Co, these influences have been monitored and controlled. The need for Public Consultation imparted a significant delay to the original timescale of which prospective tenders were briefed. Consequently, those prospective bidders were kept informed and updated through the Public Consultation exercise and as a consequence only one of the five bidders withdrew from the process (albeit at Tender stage and too late to be effectively replaced).

5.3 Design team

The Trust has previously worked with Project Co on three major variations; the new GP Practice, the Infrastructure works associated with the Land Sales at CMH and the Endoscopy Project. The first and last of these three projects, required extensive architectural design. LNWH is subsequently satisfied that Project Co can deliver high quality designs that deliver quality clinical services.

The design team and Project Management is procured by Bouygues Project Management division who have procured specialist engineering, quantity surveying and structural engineering skills all procured by the Bouygues Project Management division. Project Co team also provide Project Management support.

LNWH has also supplemented its own team with co-ordinating advice from a Healthcare Planning specialist and its own Medical Equipment and Procurement Support Team. All working with the Trust's Operational Divisional Management Team, the Trust's Transformation Team and the Trust's Estates & Facilities Team who manage the PFI Project Co on a day-to-day basis.

The specification of many aspects of the design are pre-dictated by the PA and the materials, equipment and maintenance regimes set out therein. Any derogation due to changes in guidance will only be accepted after co-review by the Trust and PFI Project Co. Those accepted are fully recorded in detail on the schedule of derogation (Appendix 6).

Examples of compliance with guidance include:

- Obligations of the Trust's Green Plan as well as those relevant aspects of the wider Net Zero Carbon agenda and the PFI Project Co's own desires for Carbon Reduction.
- Changes to HTM 03 01 and the requirements for ventilation services within clinical spaces

These have had a direct impact on the design and the Trust and PFI Project Co have worked together in optimising the re-investment of life-cycle programmes with the new specified works.

The design of the facility has followed the industry-standard Royal Institute of British Architects (RIBA) Work stages with formal approval given at Stage 2 (OBC) and Stage 4 (FBC), the latter being the design that has been taken to Tender. The Design Team are engaged by the PFI Project Co based on a fixed-price fee submission with the terms of that engagement (as regard to the Trust) being that captured within the original PA. The full CMH EOC Architectural Derogations can be found in appendix 7.

5.4 Alignment with Trust and ICS Strategy

The Central Middlesex Hospital site has a long history of planned elective care. The Ambulatory Care and Diagnostics Centre (ACAD) was opened by Tony Blair, Prime Minister, in 1999. It was the original "Treatment Centre" that delivered a physical separation between elective and emergency care and was designed and located to serve a wider population which would be incentivised to travel further than might have otherwise been expected in return for the certainty that their care would be provided at a planned point in time without the risk of that care being cancelled due to pressures on the emergency pathway.

Under the previous "Shaping a Healthier Future" Strategy for NWL, CMH was again separated out and allocated as specific location for elective care. The notion of its central location within NWL, the absence of busy emergency centred care and the exceptional quality of the facilities available, again make the CMH site ideal for the notion of being a home for planned healthcare activity.

LNWH published its new strategy for 2023 to 2028 in February 2023 called "Our Way Forward". Within the strategy, it sets out CMH will be an elective care hub and the home for the NWL EOC. Other HVLC specialities will be prioritised at the site encouraging a site culture focused on high quality and highly productive planned care, without risk of disruption from emergency care services. This complements the strategic goal to make best use of each of the trust's sites, with differentiated service offers at Ealing and Northwick Park Hospitals to support high quality of care and meet local population needs.

Given the history of planned care on the CMH site, the protection of the site from the operational pressures of the Emergency Pathway and the continued use of CMH by surgery firms and the associated critical care support that requires, the concept of locating the EOC at CMH is strongly aligned with local and sector strategies.

From an Estates perspective, there is untapped utilisation of modern twenty-first century healthcare facilities. The EOC fits into the footprint of the existing structure and significant modifications are required to less than 20% of that space (by area). A substantial proportion of the EOC will be re-purposed existing space that may require some lifecycle updating as part of the ongoing commitment of the PFI Project Co to maintain the facilities to the condition required by the Project Agreement.

The proposal does displace some Outpatient activity, but the site does hold the capacity to accommodate this displaced activity elsewhere on the site. In fact, the need to review Outpatients acts as a prompt for a much wider capacity and utilisation assessment. The CMH "design" was generally founded on a long association with specialist discipline-led care, derived from "patient focused care" models of the late-20th century. CMH was a small DGH that proved to be sub-scale and unable to operate effectively compared to its larger neighbours, as the population became more mobile and more focused on outcome led care models, then CMH would never have been able to deliver the wide range of services that it was originally designed for.

As a PFI site, exit costs are too high to compete commercially with the alternative of better utilisation. To this effect CMH provides the ideal home for the EOC, with bed spaces that can be occupied and theatre

facilities that can be readily expanded. There is no physical overlap (other than local choices that can be met with minimal impact) and the facilities are readily adaptable to the needs of the EOC.

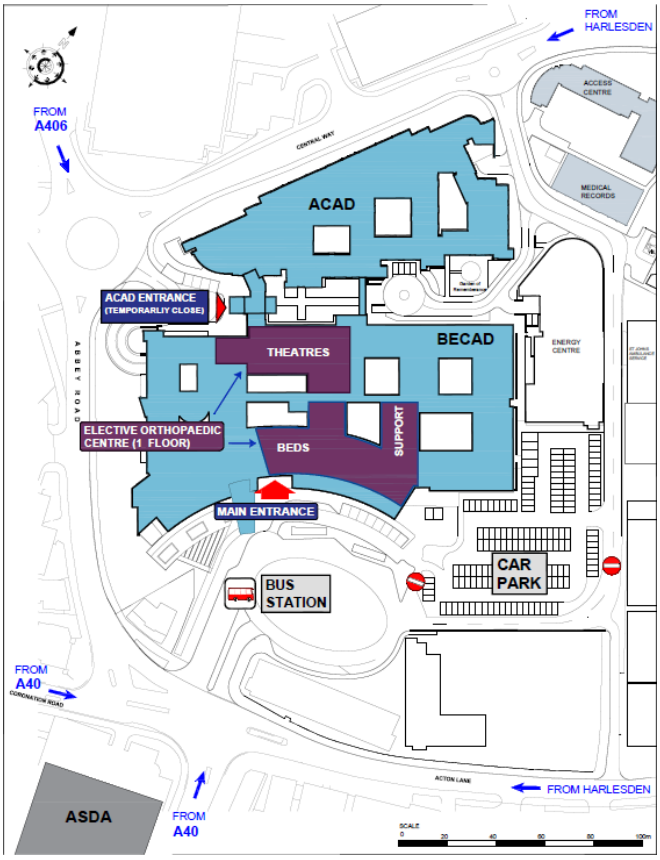
Work is in progress on the development of the ICS Acute Strategy, through the Acute Collaborative. This will establish the framework for the ICS Estates Strategy.

As a Trust, LNWH has established guidelines for LNWH site and service configurations. These guidelines are to be used to determine which services should be delivered from each of LNWH's sites. This is to inform immediate service improvement planning and space prioritisation decisions. Whilst these guidelines can be overridden, the burden of evidence should be higher than decisions that follow them. Within the guidelines, it is stipulated that Central Middlesex Hospital is now the ICS Elective Care Hub, prioritising high volume surgical specialties and should therefore be a key driver for the location of the NWL EOC. These guidelines were incorporated and affirmed within LNWH's 2023-2028 strategy published.

5.5 Site plan and design of preferred option

A site plan for Central Middlesex Hospital showing the proposed location of the EOC (at 1st Floor level) is set out below.

Figure 9 - Site plan



As previously noted, the design of the preferred option sits within the existing Theatres of the BECaD Wing (originally the Emergency Theatres for the CMH site). To these three Theatres will be added two further Theatres generating a total of five for the EOC, along with a ten bay First Stage Recovery unit and associated support facilities. The design of the new facility is shown below:

Figure 10 - Design of the new EOC facility

5.6 Tender exercise and capital costs of the preferred option

An invitation to tender was issued on 23rd January 2023 with a one-month period. Following closure of the tender period on 23rd February, the five tenders received were adjudicated, three shortlisted and a report produced. The full process and detailed assessment of the Tender exercise is captured within the Tender Report by the PFI Project Co.

The conclusion of the formally adjudicated Tender Prices is summarised below:

Table 20 – Tender Prices for Option 5 (Preferred Option)

Contractor	Price	Index	Period
Bidder 1	£3,923,845.61	100	26 Weeks
Bidder 2	£3,964,318.78	101	22 Weeks
Bidder 3	£4,154,195.33	106	25 Weeks

The Tender Report recommends the tender submitted by Bidder 1 and this is endorsed by both the PFI Project Co and LNWH Trust Estates & Facilities team.

Bidder 1 has also been appointed as the Contractor for CMH's Endoscopy Project. This was noted during the tender exercise and in making the recommendation by LNWH Trust & Estates Facilities team. A single contractor offers economies of scale, risk mitigation and improved on-site liaison across operational teams.

While not successful, the addition of the Trust nominated bidder (Bidder 2) has ensured that the Tender exercise is "fresh" and competitive with a positive outcome for the NHS. The closeness of the outcome also supports a robust process with clear content, given the limited extent of queries and uncertainties that the process has generated.

In the Tender Report the Professional Quantity Surveyor has compared to their own original assessment likely cost. This implies an increase of cost of circa £500k; while reflective of actual submitted information, it must be noted that in transferring the original Cost Plan to the OBC, risk elements

identified had been applied to enhance OBC values and a direct comparison, is very much like-for-like; the Tender Exercise has delivered the outcome predicted within the OBC.

The output of the Tender exercise has been taken forward to the FB Forms (appendix 8) and added to other cost lines and risk allowances. Of those cost lines and risk allowances:

- Fees – supplemented with additional Trust Project Management to support the wider interface of the Project with Operational Teams (both delivery and outcome)
- Non-Works Costs – updated to fully incorporate Project Development costs.
- Equipment Costs – costs reviewed and schedules remain as projected at OBC stage.
- General Contingency – a 5% of Works Cost allowance has been retained to cover potential design development through Stage 5 of the Project. While working with a fully approved Stage 4 design, it is felt nonetheless prudent to retain this allowance given the unique operating arrangement for the EOC that might impact on works.
- Optimism Bias (OB) – while mitigated significantly by the move to FBC stage, there remains an element of risk that fall within the remit of OB. This assessment is modelled using a standard appraisal matrix that sets an upper limit of the potential “optimism risk" and this is then mitigated by the specific stage of the Project’s development. This appraisal assesses a 7% allowance of Optimism Bias is retained within overall Project Costs at FBC stage. More detail can be seen in appendix 9.

The FB1 summary of costs is set out in Table 21 with full costs detailed in Appendix 9.

Table 21 - Summary of Capital Costs

Item	Cost inclusive VAT (£)
Work Costs	5,686,453
Fees	628,415
Non-work costs	1,004,400
Equipment costs	1,225,200
Contingency (5%)	284,323
Optimism Bias (7%)	583,114
Total	**9,411,904**

5.7 Construction and works management

Once approval of the FBC is confirmed the works will be managed by the PFI Project Co in line with requirements of Schedule 22 and good industry practice. The Project Manager will meet with the Client Team and the PFI Trust Representative on regular basis to report on progress, variations (if any), a financial standing and cash-flow of the works. Appropriate summary reports will be communicated wider. Variances of any KPI (quality, time and money) will be duly reported based on the context of the same.

The works are planned to be formally instructed on 20 April 2023 (subject to approval on 18 April 2023) such to allow works to construction to commence on 25 May 2023 and complete on-site by 30 November 2023 (see table

5.7.1 Enabling works

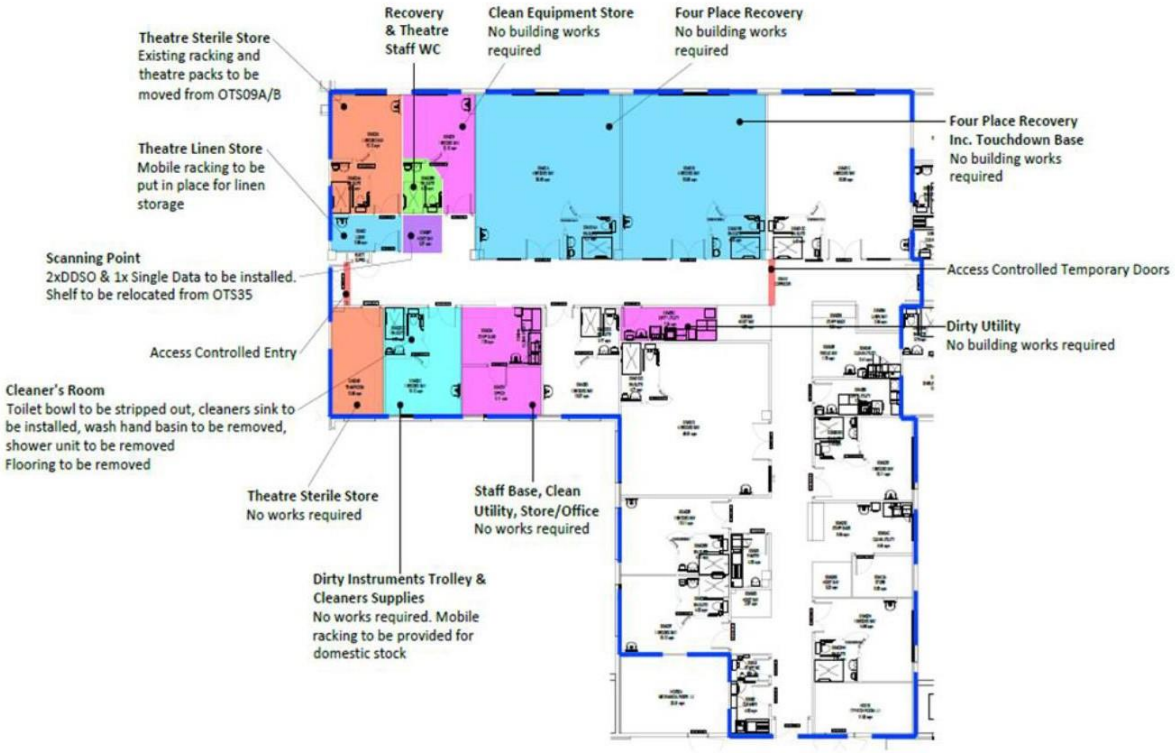
The Trust will have completed a series of relocation and decanting works that are mainly centred upon the re-purposing of existing functions across existing spaces between January and May 2023. The EOC Project coincides with a wider review of functionality across the CMH site and in particular in relation to Outpatient functions.

The one permanent move sees the Neurophysiology Team move to the Second Floor as well a couple of domino moves (TB Clinic moving to the ground floor) to create the necessary void. These works are in hand for timely completion through the Main Contractor lead-in period.

In order to undertake the works within the Theatre complex, yet maintain activity within the three existing Theatres, Recovery and support accommodation relocates to Ward G1. Again, these works are being undertaken in good time for vacant possession handover on 25 May 2023.

The enabling works to relocate to Ward G1 are illustrated below.

Figure 11 - Enabling works to relocate Ward G1



Further to the works set out in the Stage 4 tendered design, the Trust will also utilise the existing Ward G4 space to support the Theatres Team during both the construction and operational phases. These works have been developed in discussion with the clinical and operational management teams and the noted changes will be undertaken partially in advance and partially in parallel with the commissioning of the EOC.

The works to Ward G4 are illustrated below.

Figure 12 - Works to Ward G4

5.7.2 Handover

On completion, the construction works will be tested and commissioned in line with good industry practice, the design requirements and those of the supplier/manufacturer to ensure operation, all in line with the Design. There is a “no-snagging” agreement within the PA, which means all spaces must be operational on handover at day one.

5.7.3 On-going monitoring and maintenance

On-going monitoring and maintenance falls within the Business As Usual (BAU) responsibility of the PFI Project Co, their Hard FM Service Company and the Trust Estates & Facilities Team as client representative.

Soft FM and support services are provided by the Trust under directly managed Trust-wide service contracts; these service arrangements being implemented as part of the Commissioning Phase.

5.8 Planning consent

The nature and extent of the construction works are such that there are no material Town Planning considerations given the proposed works will be entirely undertaken within the curtilage and footprint of the existing BECaD Wing.

Being wholly internal modifications, the construction works are similar to that of both the prior GP Practice and Endoscopy projects, neither of these projects required Planning nor has there been any subsequent challenge to that assessment by the Local Planning Authority. Both Brent Council and OPDC (the organisation charged with Planning powers within the development zone) have been informed and are supportive of the “re-filling” of CMH with further clinical activity. There is no “change of use” and the remit of the original ACAD Planning approval as a Treatment Centre for North West London (dating back to the later 1990’s) supports the site selection of CMH to host the EOC.

5.9 Legal and commercial issues

A formal Deed of Variation to the PFI Project Agreement (PA) is required by the PFI Project C, following standard precedent format. This deed will have legal input from the LNWH's and PFI Project Co's legal advisors (Capsticks and Addleshaw & Goddard, respectively).

Works will be instructed under a Letter of Underwriting issued by LNWH to the PFI Project Co and further supported by a Letter of Indemnity (with both documents reviewed by the Trust's legal advisors). The Letter of Underwriting will move to a Deed of Variations as soon as the process allows.

Engagement of the construction contractor remains part of on-going negotiations within the PFI Project Co. This will occur via a standard form of JCT Contract, likely to be the Intermediate Form, which is familiar to both parties.

Risk allocation is important for the approval process, and PFI lenders are particularly cautious. Trust teams will use the Letters of Underwriting and Indemnity to define risks in a way that avoids undue premiums and allows transfer to the PFI Project Co once adequately appraised.

The project must meet the legal costs of the PFI Project Co as defined in the Deed of Variation and associated documents. These costs are included in the FB forms (appendix 8).

5.10 Key construction risks and mitigations

The main construction risks are summarised below:

Table 22 - Key construction risks for the NWL EOC development

Risk description	Mitigating actions	Mitigated risk rating (likelihood x impact)
There is a risk that storage is insufficient resulting in poor process and delays to care	Redesign storage areas in advance of opening to maximise use of space. Rationalise products Involve clinical teams in solutions	6
There is a risk of delay or cost increase due to PFI Project Co taking longer to make decisions than planned, requiring significant change, or getting lenders approval	Weekly assurance meeting to address issues as they arise Successful track record of working with PFI Project Co Non-adversarial relationship is continued with early engagement	4
There is a risk that the displaced admin space cannot be accommodated in the footprint	Prioritise the need for space and develop a plan in consultation with Programme Board Agreed plan for space on G 4 Utilise unoccupied space elsewhere in CMH where feasible Develop agile working solutions where feasible	3
There is a risk that the extension of the EOC building footprint reach into outpatients will have a detrimental impact on the displaced services	Engagement with affected teams to develop alternative locations Review all outpatient capacity at CMH to identify opportunities for improved utilisation of space Explore alternative outpatient delivery models where feasible	3
Potential risk of delay or cost increases due to availability of	Continuous dialogue with PFI Project Co	6

materials and/or supply chain constraints	Plan for early procurement of materials	
There is no space for bed hold	Review patient flow to identify solutions	3

A risk register for the full business case is described in the Management Case (Chapter 7) and in appendix 10.

6 Financial case

Chapter Summary
Chapter 6 sets out the revenue and capital financial case for the development of the NWL EOC, including the scheme's affordability and impact on the trust's position and balance sheet and income and expenditure.

Key Messages
- The NWL EOC financial analysis includes the income and expenditure position for the first two years as set out below. This shows a net income and expenditure benefit in the first full year of operation of £3.968m to the NWL system.
- Outputs from the public consultation and assurance process have been assessed from a financial standpoint, and the only material change from a financial perspective is the patient transport solution. The proposed transport solution has been costed at £0.106m per year, which will increase the annual running cost of the EOC.
- NHS Targeted Investment Fund (TIF) has been secured to fund the projected £9.412m capital investment to facilitate this development.
- Enabling works are being funded in advance of business case authorisation to ensure the critical path for the development and construction of the EOC remains on track along with needed case development investment.
- Taking into account the modelling principles employed and the results of the sensitivity analysis, the Financial Case demonstrate that the financial modelling assumptions are sufficiently prudent that the model is able to absorb the most likely outcomes over mobilisation and over the longevity of the case.
- The sensitivity and scenario analysis highlights the robustness of the modelling when tested against a number of parameters.
- The principles underpinning the proposed financial and commercial arrangements between the NWL Acute Trusts have been jointly developed and were agreed at the Acute Collaborative Finance and Performance Committee on 10th March 2023.
- The financial model has been developed considering the recurrent investment needs flagged to facilitate a Lead Provider Hosting model. Revenue and capital costs have been captured to facilitate the needed digital infrastructure specific to the EOC development. To support realisation of productivity ambitions, significant training investment has been included to provide new ways of working training.
- As part of the governance process, an addendum to the FBC has been produced setting out the activity and financial implications for each organisation to support decision making on an open and transparent basis.

6.1 Key assumptions in the financial model

The financial model has been developed to reflect with as much precision as possible the likely financial consequence of the new NWL EOC, including LNWH DC and EL case load and taking on the elective activity for the wider NWL Sector (excluding ASA 3 and above and revisions).

The refreshed financial tables can be found in full detail in appendix 3.

Capacity maximisation has been at the centre of the model's development, with the points below demonstrating how this has been captured:
- The £9.412m capital requirement, funded by the NHS Targeted Investment Fund. This scheme is the number one priority for the sector.
- The capital costs include £0.2m relating to enabling works for relocation of the Outpatient area, temporary relocation of Recovery to G1 and relocation of staff/services to accommodate the new theatre footprint including preparation works for G4.
- Capital charges are based on post tender fixed price RIBA Stage 4 design costs, with a 12% contingency (5% general contingency and 7% optimism bias) risk adjustment. This is the unmitigated risk to manage the potential impact of surging supply chain costs as a consequence of the conflict between Ukraine and Russia.
- Collaborative workforce model development with the multidisciplinary service clinical leads.

- Full costing mapped the patient's pathway from point of referral into inpatient case management ending with the patient being discharged back to the community and home trusts for post operative care and rehabilitation.
- Outpatient modelling has been assumed out of scope as the clinical model supports that this activity will be undertaken by the home trust organisations facilitating care closer to home where viable
- Modelling includes various uplifts to mitigate financial risk including optimism bias (as detailed above), impact of indexation (revenue and capital), temporary staffing premium (reflecting current market backfill needs), application of a 10% Discounted Cashflow (DCF) adjustment to account for the time value of money (modelled at a heighted rate due to current rates of inflation) and DNAs.
- The costing model assumes that the service will be hosted by LNWH and assumes that staff will be employed by the host organisation. The sensitivity analysis addresses the impact of different staff deployment options for potential scenarios outside of the modelled case.
- Activity modelling is reflective of the operating plan needs up to the end of 24/25 at which point the cumulative impact of GLA population demand growth beyond 2025 up to 2029 is used as this exceeds the 110% modelled in the operating plan (2029 is the ceiling year in the model as this is when beds become a limiting resource, activity beyond this point plateaus).

- Income has been modelled based on the LNWH average tariff and local MFF (this reflects the costing model deployed also). Detailed in the table below is the year two (first full year) income and activity plan transfers that will be required to wider NWL providers in scope.

Table 23 - Organisational cross charging on a full tariff basis for the preferred option (year 1)

	Elective DC and IP	Full Tariff (£)
ICHT	304	1,955,680
Hillingdon	267	1,725,080
CW	336	2,149,056
		5,829,816

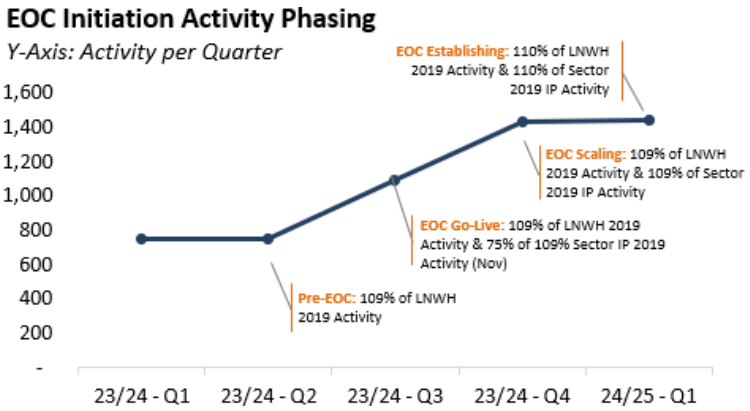
- Sector benefits have been quantified using the 2019/20 National Cost Collection (NCC) inflated to current year prices. This shows an initial NWL £3.673m annual cost saving using this method (based on 23/24 anticipated contracted activity and excluding any additional capacity created through the development of the EOC).
- Through the Finance Workstream, the implications of the development of the EOC have been explored in terms of the impact to the home Trusts. The residual overheads are known with clarity and these valuations have been used to determine a level of financial relief of these standard costs (6 months in year one of the business case). This will allow home organisations a period to stand up replacement services to occupy vacated clinical space.
- Investment in supporting corporate services have been captured with estates charges being costed with the facilities team and with increased investment in other revenue support functions such as ICT, Finance, Insurance being captured based on the % of LNWH existing costs represent of direct clinical spend.

- The appraisal and the approach to the financial assessment has been developed and supported by the NWL CFOs.

6.2 Activity modelling

Activity in year one of the service gradually increases to allow for a manageable pathway transition. Details of the activity ramp up that lead to the recurrent capacity (as detailed above) are shown in the chart below (plan assumes commencement in November 2023):

Figure 13 - NWL EOC Activity phasing



6.3 Impact on the trust's Income and Expenditure position

When reviewing the Income and Expenditure position for the Trust, it is important to consider both the impact for LNWH and also the wider sector Implications. It is vital that this is assessed over year one (implementation year) and year two (recurrent position) of the project.

The recurrent annual sector benefit to I&E is £3.968m (£0.1m in year one due to home trust relief for overheads/stranded costs, phased activity plans and mobilisation investment) is shown below:

Responses from the public consultation and assurance process were assessed from a financial standpoint and the only material change from a financial perspective was the patient transport solution. The proposed transport solution has been costed at £106k per year. Reducing the net surplus of the EOC to £3.968m, starting in the first full year of operation. This is in absolute terms and considers operating at full capacity.

The model takes the detailed patient-level costings from the trusts, which gives an indication of the costs of the work being undertaken within the trusts, drawn directly from the trusts' reporting systems. This analysis shows a recurrent annual benefit to the I&E position of £3.968m. In effect, across the four trusts it costs £3.968m more to treat these patients with the current model than it would within the EOC.

6.4 Impact on the trust's balance sheet

Traditional capital charges calculations have been deployed over the course of the investment. For the preferred option, £9.412m of capital investment has been modelled which included development costs for project management, clinical pathway modelling, activity planning, ICT transformation and legal fees in addition to the development works costs (including design fees) and equipment.

Assets have been depreciated (with respective capital charges costed at 3.5%[16]) over the useful life of the investment. The capital investment plan, with associated capital charges in Year one and Year two of the proposal, is shown below.

Table 24 - Impact of the NWL EOC on the Trust's Balance Sheet

LNWH DC & IP + NWL IP					Year 1	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 2
		Std life		£000	£000	£000	£000	£000	£000	£000	£000	£000
					NBV b/fwd	Depn	NBV cfwd	Cost of cap	NBV b/fwd	Depn	NBV cfwd	Cost of cap
Refurbishment (Aligned to PAC Development) (25 Years useful life)	Wrks	25		7,610	7,610	304	7,305	261	7,305	304	7,001	250
Development Costs (25 Years useful life)	Wrks	25		577	577	23	554	20	554	23	531	19
	Wrks	25			0	0	0	0	0	0	0	0
Equipment (Medium Term Assets) (7 Years useful Life)	Eqpt	7		1,225	1,225	175	1,050	40	1,050	175	875	34
	Eqpt	7			0	0	0	0	0	0	0	0
	Eqpt	7			0	0	0	0	0	0	0	0
	IT	5			0	0	0	0	0	0	0	0
	IT	3			0	0	0	0	0	0	0	0
Total capital investment required				**9,412**	**9,412**	**502**	**8,910**	**321**	**8,910**	**502**	**8,407**	**303**

[16] 3.5% is NHS standard practice based on historically low interest rates. However, the current economic situation is reflected in sensitivity analysis and the risk register.

6.5 Cashflow implications

To determine that impact to LNWH's cashflow, a discounted cashflow forecast has been developed over a 25-year period, based on a discount factor of 10%. A higher discount factor has been applied to the case to reflect growing inflation pressures and in turn the depletion of the value of money over time. Over this period, it is modelled that £35.510m will be the discounted cashflow benefit to the centre over the next 25 years (commencing with effect from Nov 2023).

Table 25 - Impact of the NWL EOC on the Trust's Cashflow

LNWH DC & IP + NWL IP	Year 1 £000	Year 2 £000	Year 3 £000	Year 4 £000	Year 5 £000	Year 6 £000	Year 7 £000	Year 8 £000	Year 9 £000	Year 10 £000	Year 11 £000	Year 12 £000	Year 13 £000	Year 14 £000	Year 15 £000	Year 16 £000	Year 17 £000	Year 18 £000	Year 19 £000	Year 20 £000	Year 21 £000	Year 22 £000	Year 23 £000	Year 24 £000	Year 25 £000	Total £000	
Revenue cash	483	4,774	4,947	5,093	5,217	5,341	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	118,295	figs from Revenue tab
Capital cash	-9,412																									-9,412	figs from Capital tab
Total	-8,929	4,774	4,947	5,093	5,217	5,341	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	4,865	108,883	
Disc Fact 10%	1.000	0.909	0.826	0.751	0.683	0.621	0.565	0.514	0.467	0.425	0.386	0.351	0.319	0.290	0.264	0.240	0.218	0.198	0.180	0.164	0.149	0.135	0.123	0.112	0.102		
NPV	-8,929	4,339	4,086	3,825	3,563	3,317	2,749	2,501	2,272	2,068	1,878	1,708	1,552	1,411	1,284	1,168	1,061	963	876	798	725	657	598	545	496	35,510	

As outlined in the economic case, we have also considered the financially quantified social benefits of the service change, increasing the net present value over a 25-year term of the business case increases from £35.510m to £52.771m, leaving us with an economic ROI ratio of 5.6:1.

6.6 Efficiency savings

Through the development of the Lead Provider Hosting arrangement and also through the continuation of the finance workstream as we lead into mobilisation, the key areas that underpin delivery of the efficiencies outlined in the case will continue to be drawn out.

To this point, National Cost Collection data has been used (inflated to current prices) to determine the cost savings that will be release as a result of the EOC development. Based on the first full year of activity (Year Two of the Model), there is a potential that this model will release £3.673m in efficiencies, primarily from moving to GIRFT standards for LOS and theatre utilisation.

Table 26 - Potential Cash-releasing efficiency gains

NWL Trust	NCC Price	Mobalisation Year Activity	Opening Year Activity (Recurrent)	Mobalisation Year £	Opening Year £ (Recurrent)
ICHT	£ 7,641	304	818	£ 2,322,864	£ 6,253,394
Hillingdon	£ 7,345	653	718	£ 4,796,285	£ 5,275,914
CW	£ 6,557	336	905	£ 2,203,152	£ 5,936,052
LNWH - Inpatients	£ 6,807	611	1,480	£ 4,157,943	£ 10,070,957
LNWH - Daycase	£ 2,411	648	1,569	£ 1,561,123	£ 3,781,895
Grand Total		**2,551**	**5,490**	**£ 15,041,366**	**£ 31,318,211**
				£ 12,847,163	**£ 27,645,235**
				-£ 2,194,203	**-£ 3,672,976**

The benefits realisation plan described in appendix 11 includes an assessment of the impact on unit costs of achieving target improvements in productivity and efficiency. This includes:

1. Weighted activity unit (WAU) all activity – targeting a 5% cost reduction, as there is no change to trauma, which is out of scope.
2. WAU elective activity – 11% cost reduction, as only routine inpatient orthopaedic activity is in scope.

The financial savings will be achieved by delivering a service that is more efficient and in line with GIRFT standards, enabled by a modern facility and centralisation to provide the critical mass and clinical expertise. The EOC will add capacity to the NWL system to treat more patients. This undertaking requires more staff. With the elective-orthopaedic-centre-enabled service transformation, we are able to treat

those additional patients more efficiently. This will reduce the unit cost compared to a 'do nothing' option.

The medical workforce cost will transfer to the EOC via recharges. At present, we have not identified an organised grouping of staff whose principal role is the delivery of the transferring activity. As result, it is anticipated that these staff will remain in the 'home' trusts, strengthening their staffing positions by reducing vacancy rates and being utilised to deliver replacement activity (additional complex activity and repurposed capacity). Plans for the repurposing of capacity have been scoped and are being developed by the three 'home' trusts.

Taking into account the modelling principles employed and the results of the sensitivity, the financial case demonstrates that the financial modelling assumptions are sufficiently prudent that the model is able to absorb the most likely outcomes over mobilisation and over the longevity of the case.

The sensitivity and scenario analysis has been reviewed by the Financial Workstream and revalidated. This analysis highlights the robustness of the modelling when tested against a number of key parameters.

The principles underpinning the proposed financial and commercial arrangements between the NWL acute trusts have been jointly developed and agreed by the chief financial officers of the acute trusts.

Greater work has been undertaken to date reviewing the detail on stranded costs (which has been reflected in the change of methodology in costing marginal relief in Year One). As well as appraising the efficiency opportunities that the EOC will deliver, support has been provided through the Finance Workstream to explore wider savings opportunities from additional contributions from the use of vacant home capacity and also temporary staffing savings from retained staff in difficult to recruit to areas. Neither of these saving themes have been captured within the financial detail of this case.

To test the efficiencies calculated through the national cost collection method above the three core efficiency drivers have been calculated using a bottom-up costing measure to test the reasonableness of the determine value added.

6.6.1 Theatre utilisation savings

Reviewing the analysis through Model Hospital, the level of expected savings can be determined through the expected number of cases to be completed during and standard 4 hours theatre session. There is an opportunity in terms of theatre savings that can be realised from moving to a 2 elective cases per theatre session model versus the individual Trusts' existing performance. Currently, the average number of cases through theatres (based on the case mix in scope) is 1.6 per theatre for the 4 NWL providers. Based on GIRFT standards, the average number of cases through a standard theatre session is expected to be 2.3 (weighted based on the day case activity in scope). This equates to 739 sessions is released capacity which would generate £1.770m in direct clinical theatre costs.

6.6.2 Length of Stay Savings

The GIRFT modelling principles adopted shows that the expected patient LOS would be 2.3 days for the elective patients in scope. The sector's current performance is 2.6 days for elective care and specifically 3.7 days for knee replacements and 3.4 days for hip replacements. This would therefore release 4,165 bed days by delivering this standard. This would realise savings of £1.070m based on a ward direct costing model £257 per bed day.

6.6.3 Site Consolidation Savings

In addition to the above, there will be savings generated from the rationalisation of facilities. The value of these efficiencies can be determined through the calculation of the difference between the marginal rate costs of services delivered and the present income attracted from the delivery of these services. The costing model has assumed that these savings will not be realised in year one during mobilisation to allow for a suitable period of time for vacated theatres and ward domains to be repurposed. Based on the

methodology above, there is a potential saving of £1.900m from the release of premises and support costs.

6.7 Sensitivity Analysis

The sensitivity analysis presented explores a range of financial upsides and downsides that could change the financial modelling presented. The financial model communicates the expected monetary impact of the case as described however it is important that we explore a range of potential scenarios that could influence the financial position.

There are five areas of risk that have been modelled below which the Project Group determines to be the most significant areas that could vary against the modelling assumptions deployed above. These risks are largely a reflection of the current position in terms of expected methods of staff deployment and recruitment and wider price challenges. The analysis below reflects a greater understanding of the recruitment market challenges and communicates a reduction in the overall risk profile of the financial case driven from changes to the finance model. Investments in training and recruitment initiatives have been modelled in the base financial case to support better recruitment outcomes.

Alongside the risks presented there are three potential benefits that have not been captured in the financial case however could improve the overall financial margin. These have also been explored below to inform the assessment of influences to the financial case.

6.7.1 Sensitivity Contingency and Optimism Bias

Due to the risk to current supply change prices, it is necessary to consider various views on the appropriate optimism bias applied to the capital charges assumed within this case. In this scenario, a relatively risk adverse approach has been taken as the unmitigated contingency of 12% has been applied. Responses to the tendering exercise have been received and therefore the prices captured for construction works have been quoted at a fixed price based on the design plans issued. 12% (5% general contingency and 7% optimism bias) is the top estimate that should be consider for a programme at this stage of development.

Considering a mitigated position, taking into the robustness of valuations collated so far, then it is determined that 5% would be sufficient which would reduce capital costs by £0.583m and annual revenue costs by £0.051m against the model presented.

As the final tender costing templates are available, this provides a significant level of assurance regarding the capital valuations included. Considering a maximum exposure rate of 16% above base case costings (2% per remaining active month of the project), this would result in an increase in capital requirements of £0.402m and £0.035m annual revenue implications.

Table 27 - Optimism Bias Sensitivity

	Capital Costs	Movement in Capital Costs	Average Capital Charges (Revenue)	Annual Revenue Impact
Modelled Capital Charges - Contingency and Optimism Bias 12%	£9,411,904		£823,117	
Mitigated Capital Charges - 5%	£8,828,791	-£583,113	£772,121	-£50,996
Hyperinflation (2% per month to completion) - 16% (8 months)	£9,813,783	£401,879	£858,263	£35,146

6.7.2 Sensitivity Impact of Inner London Weighting

As we have developed the full business case there has been an emerging position that TUPE will not apply in the context of the EOC arrangement. Taking this as the most likely scenario this in turn has provided greater clarity on whether Inner London Weighting payments would apply. We can now model with reasonable certainty that staff that have been identified to be cross charged to the host will retain

their home Trust terms and conditions and the exposure to Inner London Weighting payments have been included in the base costings. For all other staff groups, we should consider that individuals have the opportunity to work at the EOC and therefore it would be reasonable to assume a proportion of exposure relating to these employees on costs. To date, the Workforce workstream have not identified a material volume of staff expressing to transfer to the EOC from their home Trusts however, it is important that we model the potential cost implications if this was to occur as conversations with employees mature. The table below communicates that if the full EOC was to full an Inner London payment methodology, this would annually increase the case by £0.562m. If, however, we considered the more likely scenario that a wider proportion of staff express to work as part of the EOC, let's say 10% of the total establishment, this would increase the case cost by £0.067m periodically.

Table 28 - Inner London Weighting Sensitivity

6.7.3 Sensitivity Reliance of Temporary Staffing

In light of the likely outcome that TUPE does not apply to this case (legal advice pending), it is important that we consider a greater reliance on temporary staffing to support the delivery of the detail clinical model. Looking at the current recruitment market as well as the time to recruit 18% during mobilisation year and 15% recurrent of the total establishment has been assumed will be covered by temporary staffing. The projected establishment is currently showing an expectation that 5% of the establishment will be filled with agency and 10% with locum/bank staff recurrently. Due to the significant recruitment effort (albeit this is partially mitigated by the investment in recruitment and training) that will be needed it is important to consider a wider cost exposure for a range of vacancy rates that in turn will increase the cost of temporary staffing premiums. Shown below is the impact if 30%, 25%, 20% or 100% of the remaining vacancies were to be filled with agency which generates an annual cost range of between £0.311m to £2.868m, making this the single biggest financial risk to the model.

Table 29 - Temporary Staffing Sensitivity

6.7.4 Sensitivity Length of Stay (LOS) Reductions

GIRFT principles have been the foundation to calculate the required bed capacity to deliver the projected level of activity. This assumes an average LOS of 2.3 bed days for all inpatient care. Detailed below is the cost impact (based on SLR direct bed day costs) if LOS was to move in 0.2 of a day intervals from 2.3 days to 3.5 days. This would require additional investment of between £0.217m and £1.303m of ward investment.

Table 30 - Length of Stay Sensitivity

		Annual Number of Occupied Bed Days (Modelled Case)	LOS Scenarios					
Average LOS		2.3	2.5	2.7	2.9	3.1	3.3	3.5
Inpatient Activity	4,226	9,721	10,566	11,411	12,257	13,102	13,947	14,792
Excess Bed Days			845	1,691	2,536	3,381	4,226	5,072
Excess Direct Cost @ £257 per Bed Day - £'000*			**£ 217.24**	**£ 434.47**	**£ 651.71**	**£ 868.95**	**£ 1,086.18**	**£ 1,303.42**

* Based on LNWH direct SLR bed day cost

6.7.5 Sensitivity Theatre Utilisation

As part of the development of the clinical model, the number of case per 4 hour theatre session has been based on GIRFT standards of 2 inpatient cases per list of 4 day cases. Based on variability across the sector, two other flow models have been considered (as detailed below) which could result in a cost consequence of between £1.150m and £2.012m, if the capacity needed to be replaced with Waiting List Initiative lists (if the Trust were able to generate capacity within operational hours then the cost of the options modelled would be between £0.455m and £0.797m). It is important to note that there is a high degree of confidence that the model utilisation is possible due the referred elective caseload being below ASA 3.

Table 31 - Theatre Utilisation Sensitivity

				Activity (Year 2)	Equivilent 4 Hour Lists	Additional Above Modelled	WLI Cost for Activity Recovery £'000	Additional Cost for Lost Productivity £'000
5-hour list: Inpatient	2.00	Cases per 5-hour List	Expert Opinion	4,226	2,642	528	1,697	
5-hour list: Day case	4.00	Cases per 5-hour List	Expert Opinion	1,569	490	98	315	**2,012**
4-hour list (High Productivity): Inpatient	2.00	Cases per 4-hour list	Expert Opinion	**Modelled Version**				
4-hour list (High Productivity): Day case	4.00	Cases per 4-hour list	Expert Opinion					
4-hour list (Low Productivity): Inpatient	1.75	Cases per 4-hour list	Expert Opinion	4,226	2,415	302	970	
4-hour list (Low Productivity): Day case	3.50	Cases per 4-hour list	Expert Opinion	1,569	448	56	180	**1,150**

6.7.6 Sensitivity Home Trust Temporary Staffing Reduction

With the considerations made regarding recruitment in the scenarios presented above we should consider the impact of the EOC in the Home trust environments. With a greater proportion of workforce retained there is potential that these individuals will fill vacancies in key services such as Theatres and in

Ward domains preventing the need for temporary staffing. Looking at the proxy workforce supporting activity in the home trusts we have assumed that 10% of the establishments supporting activities in

scope of the EOC could replace the use of agency staff thus releasing the premium cost. This could potentially generate a further £0.385m and up to £0.769m looking at the agency reliance across NWL.

Table 32 - Sensitivity home trust temporary staffing reduction

	Home Trust Establishment	Home Trust Establishment (Weighted Based on LNWH NCC)	Average Agency Premium per Post	5% Fill Home Trust Vacancies (Covered with Agency) £'000	10% Fill Home Trust Vacancies (Covered with Agency) £'000	15% Fill Home Trust Vacancies (Co	20% F
Admin and Clerical	8.27	10.42	12.49	6.51			
Allied Health Professional	9.20	11.60	19.30				
Consultant	15.17	19.11					
Management	0.90	1.					
Medical Other	16.06						
Nursing							
Pharmacist							
Total							

6.7.7 Sensitivity Home Procurement Supply Standardisation

The host providers financial unit costs have been used to inform the cost of clinical consumables and drugs required to treat the case mix in scope of the EOC. Through the normal stages of efficiency planning and in the context of standing up a new a contract, a 3% reduction in spend would be a reasonable expectation. If we explore further product and supply standardisation opportunities then an upper threshold of 5% could be attainable. Playing this through this could deliver a range of between £0.207m and £0.345m of savings annually.

Table 33 - Sensitivity home procurement supply standardisation

	Year Two (FYE) £'000	1%	2%	3%	4%	5%
Clinical Supplies & Services	6,373.92	63.74	127.48	191.22	254.96	318.70
Drugs	530.92	5.31	10.62	15.93	21.24	26.55
	6,904.84	**69.05**	**138.10**	**207.15**	**276.19**	**345.24**

6.7.8 Sensitivity Margin from New Activity

Based on an expected margin from income that could be delivered over and above contribution to overheads from new activity delivered from vacated capacity (as a proportion of lost income from EOC activity). Under this assessment it has been assumed that delivery of a margin would be unlikely from a growth in NHS commissioned activity however savings from private patient or independent sector routes would attract a higher contribution. For this reason, the overall % expected has been captured at the lower end however considered as home Trusts are exploring the expansion of private patient activity.

Table 34 - Sensitivity margin from new activity

		% Margin Above Overheads	
	Local Valued Income for EOC Activities	3%	4%
C&W Year Two (Full Year) £	5,790,2		
Hillingdon Year Two (Full Year) £			
Imperial Year Two (Full Y			

6.8 Scenario Analysis

Based on the sensitivities presented above, it is important to revisit and appraise what the probable

impact of these pressures and benefits would be against the overall revenue and capital models

presented. To distil this, the table below shows the modelled position, the possible position (based on variables not full mitigated in the development of the full business case) and also a highly unlikely (or possible worse case position). These scenarios cover a broad range of eventualities.

Table 35 - Scenario Analysis Summary

Annual Revenue Cost Change £
Capital Costs (One Off) Change £

	Modelled	Possible	Highly Unlikely	Comments
Sensitivity Contingency and Optimism Bias	Unmitigated	Mitigated	Current	5% would be the expected level of contingency built into the capital plan at this stage of the process
		-£50,996	£35,146	
		-£583,113	£401,879	
	12%	15%	30%	
Sensitivity Inner London Weighting	Outer London (Inner London included on Salary Recharge Posts)	Further 10% of Establishment Transfers to EOC	Inner London (All Posts)	Based on TUPE guidance, assumed that a further 10% of establishment could be filled with employees attracting inner London weighting wishing to transfer to the EOC on protected T&Cs. Consultants and Medical Other grades already modelled with Inner London Weighting costs due to salary recharge mechanism.
		£67,081	£562,224	
		N/A	N/A	
	15% Capped			
Sensitivity Temporary Staffing	Market	Pooled	Pooled	Calculated taking the staff group in scope with the highest vacancy rate (Band 5 Nurses - 30%) as the worst case
		£769,405	£384,702	
		N/A	N/A	
	14% (10% Bank 5% Agency)	20% Vacancy (5% Additional Agency)	30% Vacancy (15% Additional Agency)	
Sensitivity Length of Stay	GIRFT	Top Quartile (Worst MH Performer)	Current (NWL ICB Model Hospital)	Data taken from model hospital to provide benchmark (LOS will be slightly distorted as Model Hospital cannot differentiate activity by ASA score)
		£325,855	£868,948	
		N/A	N/A	
	2.3 (Average Top Quartile MH)	2.6	3.1	
Sensitivity Theatre Utilisation	High Productivity (GIRFT)	Low Productivity	Current (NWL ICB Model Hospital)	Possible impact due to patient complexity (longer to treat), planning, infrastructure or practices
		£1,149,598	£1,377,752	
		N/A	N/A	
	2 IP or 4 DC per 4 Hour List	1.75 IP or 3.5 DC per 4 Hour List	1.7 cases per list (EL and DC)	
Sensitivity Temporary Staffing Avoided (Retained Staff @ Home Trusts)	No Benefits Included	Minimum Potential	Stretch Opportunity	Deployment of staff in core services such as theatres and also ward based nursing to fill existing service vacancies releasing temporary staffing premiums
		-£384,702	-£769,405	
		N/A	N/A	
		10%	20%	
Sensitivity Procurement Supply Standardisation	No Benefits Included	Standard Contract Efficiency	Optimal Annual Efficiency	Based on procurement efficiency expectations across clinical supplies and drugs expenditure (based on full year activity Year Two)
		-£207,145	-£345,242	
		N/A	N/A	
		3%	5%	
Sensitivity Margin from New Activity	No Benefits Included	Low Level Margin	Moderate Margin	Based on an expected margin from income that could be delivered over and above contribution to overheads from new activity delivered from vacated capacity (as a
		-£297,039	-£495,065	
		N/A	N/A	
		3%	5%	

				proportion of lost inform from EOC activity) Margin unlikely from NHS commissioned activity however savings from private patient or independent sector routes would attract a higher contribution.
Sensitivity Impact to Revenue		**£1,372,056**	**£1,619,061**	
Sensitivity Impact to Capital		**-£583,113**	**£401,879**	

When considering the financial impact of these possible scenarios, these projections would have the potential to reduce the annual recurrent revenue benefits by £1.372m based on the current financial model. It should be noted that even taking into consideration the possible impact of the sensitivities modelled above, the EOC will still make a healthy contribution when we consider both scenarios presented.

The tables below illustrate the possible impact of these quantified risks and benefits on the financial projections.

Table 36 - Impact of Possible Scenario

	Discounted Cashflow (25 Year) £m	Capital Investment £m
Current Modelled Position	£35.5m	£9.4m
Adjusted Financial Position	£23.2m	£8.8m
(Improvement)/Deterioration of Financial Case	£12.3m	(£0.6m)

Table 37 - Impact of Highly Unlikely Scenario

	Discounted Cashflow (25 Year) £m	Capital Investment £m
Current Modelled Position	£35.5m	£9.4m
Adjusted Financial Position	£19.9m	£9.8m
(Improvement)/Deterioration of Financial Case	£15.6m	£0.4m

6.9 Affordability of the Scheme

The capital development costs are key when appraising the financial viability of this case. The Trust has been working with the NWL Sector to secure the required capital facility is made available through TIF funds. The development of the Elective Orthopaedic Hub is sighted as the number one priority for capital investment for the NWL Sector.

6.10 Financial and Commercial Arrangements between the NWL Providers

Regular briefings have been held with the NWL Chief Financial Officers (CFO) through the NWL CFO meetings on the financial and commercial implications of establishing the EOC on a site managed by London North West University Healthcare NHS Trust. A Hosting and Management Vehicle Workstream has being stood up adopting a lead provider hosting model that will lead into support the eventual mobilisation of the EOC.

Detailed trust addenda can be found in appendix 13.

Hosting arrangements and impact on lead trust and partner trusts

- Given that the preferred model is for the service to be sited at CMH, the costing model assumes that the service will be hosted and assumes that staff will be employed by the host organisation. However, the 'standard costing' approach, coupled with the national pay scales for NHS staff,

means that the 'hosting' costs would be largely undifferentiated if a different trust was the lead provider. Similarly, and provided that the model is based on a single-site delivery approach, the model is largely transferable between different trusts, bar the differentiation in costs for inner and outer London staff weightings and the consequences of fixed Private Finance Initiative costs. The sensitivity analysis addresses the impact of different staff deployment options.

- The EOC will be run as a stand-alone business unit (in financial terms) within the host trust, in line with the approach adopted elsewhere and to provide transparency to all stakeholders on the financial outcomes. In terms of clinical and managerial leadership arrangements, the host trust will have a degree of discretion around inclusion within an existing division, or the creation of a separate division, provided that appropriate and adequate clinical and managerial leadership is in place.
- The EOC business unit will have an 'income budget' of £29.388m and, when operating at full capacity, will be expected to deliver the activity within this budget (the model shows a small surplus, reflecting the improved efficiency benefit to the host trust of the host trust's activity being delivered more efficiently). Patient-level costing data shows that the activity is currently costing the four trusts £33.716m to deliver – and the move to a single EOC will reduce this cost by £3.968m. This provides the collaborative trusts with two challenges.
- The host trust must run at a high level of efficiency to deliver the activity at tariff and the partner trusts must either reduce their costs or redeploy these to activities which are not loss-making, leading to an overall improvement in the collaborative financial position by £3.968m.
- To some degree, given that the trusts are operating as an acute collaborative, it is not material where this operating surplus is located, but the current model assumes that this benefit will be distributed across the four trusts in accordance with their pre-existing levels of 'overspend' against the tariff funding levels, subject to any agreement on reinvestment or service redesign across the acute collaborative. Any resources provided by each trust to the EOC will be reimbursed at full direct cost – for example, clinical staff who work within the trust providing services – with quarterly reimbursement.
- To model the implementation of the EOC, 'income' movements across the four trusts have been modelled based on the Host hospital average tariff and local Market Forces Factor (this aligns with the costing model deployed). Approximately £17m of 'activity' moves from the three partner trusts to the host trust. The key challenge for the trusts as a collaborative is to ensure that the cost associated with this activity either moves across to the lead provider, is used in another way, or is reduced. Each of the finance teams within the collaborative are working on an approach to determine a mutually agreed way forward. The model does not take into account the potential benefits of utilising the additional capacity freed up at each of the partner trusts at this stage, recognising that there will be a combination of opportunity and risk.

- As described above, the four trusts have been working more closely together on a range of joint projects since the formation of the collaborative. To support this, the trusts have signed up to a set of principles – 'the multi-system financial framework' – and these have been adopted. In particular, in year one of the business case this assumes that marginal rate accounting will be reflected for the incoming activity to the lead provider (providing the referring organisation's financial stability over the transition year to cover overheads). As the case has progressed, the trusts have refined this approach and a specific financial framework for the development of the EOC has been developed and agreed. This should not impact on the operation of the EOC but provides for a clear framework for each of the trusts to plan their finances in a time of resource constraint and financial challenge.

Activities following FBC approval:

Following approval of the Full Business Case, the following activities will need to be undertaken to ensure that the necessary contractual rigor is in situ that underpins the modelled case as detailed above:

- Ensure that individuals wishing to Transfer from Home Trusts to the EOC are facilitated to do so and the needed governance is in situ supported collaboratively by the Finance and Workforce workstreams.
- Collaborated plan for the recurrent implications of the EOC with commissioning partners across NWL Trusts and the ICB as the main commissioner (23/24 planning implications are being discussed pending full business case approval).
- Develop the basis of the formal agreements to be put in place between the providers, including whether to adopt the NHS sub-contract, SLA or other form of agreement. This will be needed to facilitate salary recharge agreements for the staff groups as identified in the case.

- Novation, consolidation and termination of necessary procurement contracts primary supporting the provision of clinical consumables are actioned.
- Facilitation through the Lead Provider agreement that efficiencies are released not only through the outputs of Service Line Report directly from the EOC but also ensuring that efficiencies have been realised as intended from Home Trust organisations.
- Revisit the treatment of NWL ICS ASA 3 and Revisions (currently out of scope).

7 Management case

Chapter Summary
Chapter 7 sets out the management case for how the model of care will be delivered, including details of governance approach (comprising a partnership level and an organisation level) and workstreams.

Key Messages

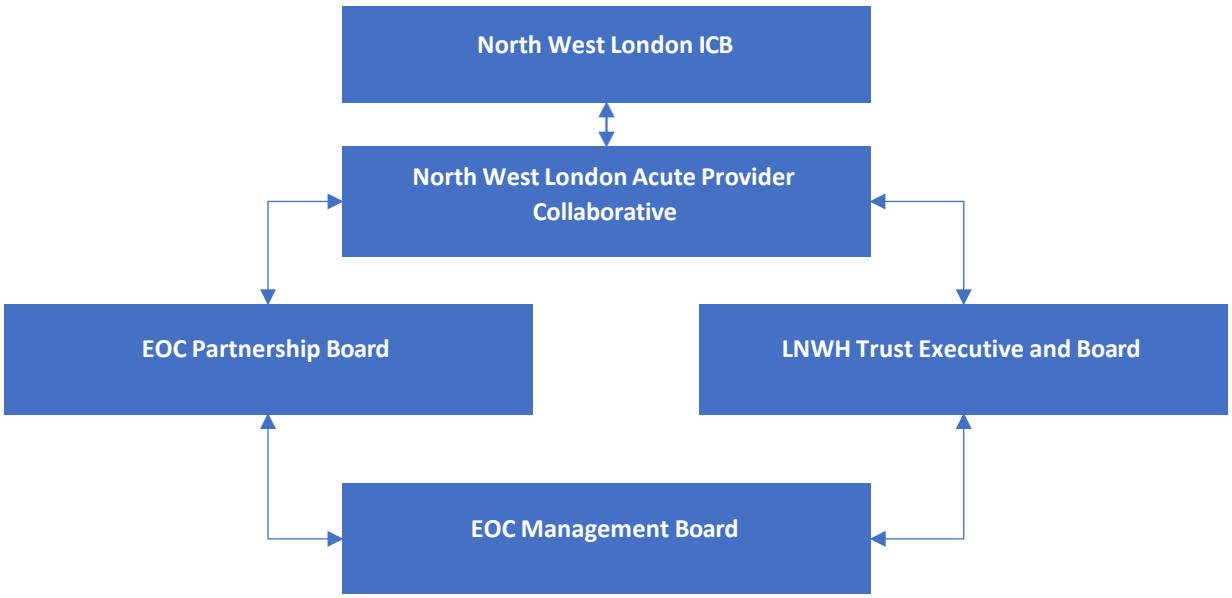
- The implementation model has been developed based on best practice evidence and draws on learning and feedback from the public consultation and external, independent assurance and advice.
- London North West University Healthcare NHS Trust will act as host for the new EOC, managing the new EOC and providing all logistical support for the EOC to operate as a free-standing business division with its own service line reporting.
- A detailed timeline, implementation plan and project plan has been developed for opening in November 2023.
- Continued engagement and involvement with patients, staff and carers is central to the implementation of the new model of care and the development of the NWL EOC.
- An initial model for sharing theatres between home trusts has been proposed with a timeline to approval, to then facilitate the job planning timeline.
- Achieving GIRFT accreditation has been incorporated into the first year of opening.
- The transport solution will be driven and implemented with support of a working group.
- Job planning for consultants will be completed by 31 August 2023.
- An extended BRP to monitor achievement of EOC benefits has been developed with revised and expanded KPI themes and metrics, designated owners and validated trajectories.

7.1 Governance model

The governance approach for the EOC will comprise two elements:

1. Partnership level – Partnership Board
2. Operational level – the EOC will be hosted and run by London North West Healthcare NHS Trust (LNWH) as Lead Provider as a ring-fenced entity aligned and within the Trust's governance structures.

Figure 14 - Governance approach to NWL EOC



The EOC partnership model is entirely consistent with the LNWH Trust vision to place "quality at our heart", by providing high-quality care, underpinned by high-quality support services and partnerships, with its four strategic priorities:

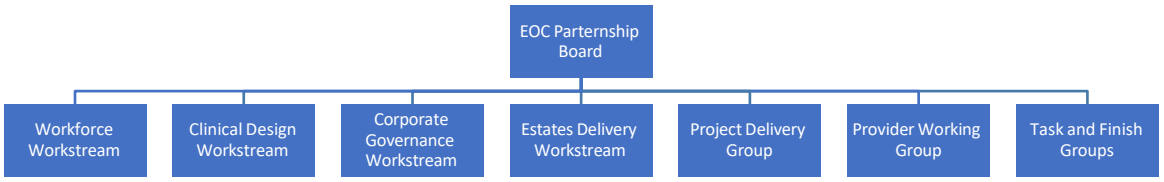
- Provide high-quality, timely and equitable care in a sustainable way.

- Be a high-quality employer where all our people feel they belong and are empowered to provide excellent services and grow their careers.
- Base our care on high-quality, responsive, and seamless non-clinical and administrative services.
- Build high-quality, trusted ways of working with our local people and partners so that together we can improve the health of our communities.

The governance model proposed in this FBC is designed to be agile as it transitions from approval through mobilisation to implementation. It is supported by four workstreams and three delivery groups (see figure 13) that can respond flexibility and make data-driven decisions that encourage system collaboration and robust risk management. While this management case provides detailed implementation plan, these are not set in stone and will be continually iterated through implementation workshops as we move towards our go-live in November 2023. This governance model with then be continually developed through the Partnership Board and post-implementation evaluation reviews.

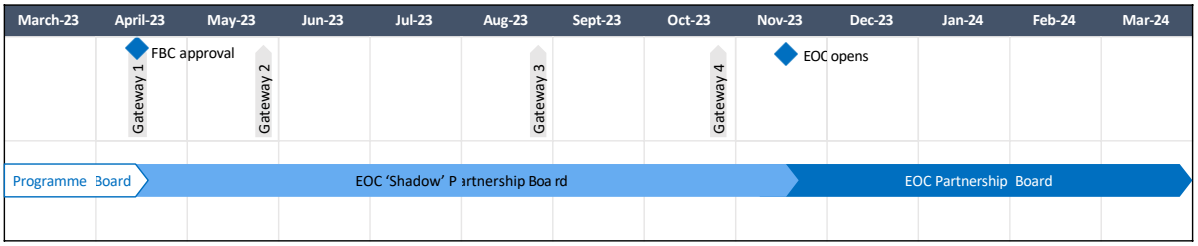
The EOC Partnership Board

Figure 15 - The EOC Partnership Board Governance Framework



The Partnership Board is supported by four workstreams and three delivery group to allow an agile transition from decision-making' & FBC approval, through 'mobilisation', to 'implementation' and opening of the EOC. The Partnership Board will run in 'shadow' form until the EOC goes live and will then formally operate as the Partnership Board (see figure 16).

Figure 16 - Transition process for the EOC governance

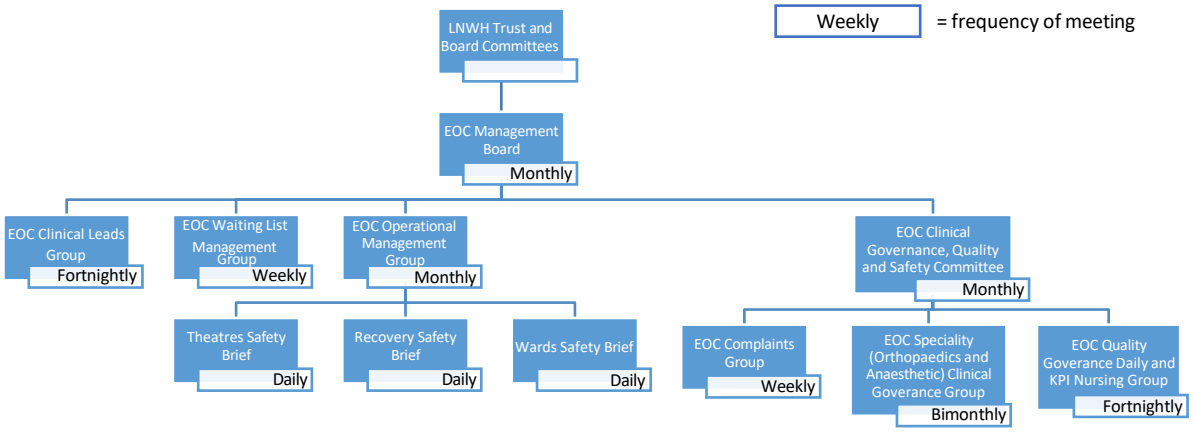


The Partnership Board will meet monthly, will be chaired by the lead provider Senior Responsible Officer (SRO) - the EOC Medical Director. It will include senior clinical representation from each of the four acute providers as well as the delivery workstream leads and will also include lay representation. It has responsibility for performance, clinical leadership, governance and risk, and finance and workforce matters. Terms of Reference for the Partnership Board will be approved by the first NWL EOC programme board that follows FBC approval - and it is expected that the transition to shadow partnership will occur in April/May 2023.

The EOC Management Board

Operationally, the EOC will be run by LNWH as a stand-alone business unit with its distinct budget, cost centre and service line reporting. In a similar fashion to other LNWH clinical divisions, for governance purposes the EOC Management Board will report to the Trust Executive Group and upwards to the Trust Board. The EOC Senior Leadership Team will be members of the Trust Executive Group, and the existing LNWH divisional governance framework will be mirrored by the EOC, and aligned with the surgical division where appropriate, as set out in Figure 15.

Figure 17 - The EOC Management Board Governance Framework



The EOC Management Board will review information reported by operational groups within the centre, the governance team and corporate partners including estates, finance and human resources. This forum will provide the platform for the discussion and communication of key EOC and trust operational, business, performance, quality, safety and governance issues. This meeting will be attended by the EOC leadership triumvirate, clinical leads, the EOC estates, finance and HR business partners, general manager, heads of nursing and therapies and the clinical governance lead.

The EOC Clinical Governance, Quality and Safety Committee maintains oversight of the governance, quality, safety and patient experience activities of the EOC. It will review reports on a variety of incidents, providing the opportunity to share the recommendations and learning derived from incidents. The Committee will review and maintain the EOC risk register, review and ratify SOPs, policies and guidelines, review and monitor key performance and quality indicators and provide a platform for discussing performance and celebrating innovation and success. The attendance will consist of the EOC leadership triumvirate, representation from the medical, nursing, therapies, management and the governance team.

In parallel with the LNWH governance, accountability to the NWL APC for strategy and business delivery will be through the EOC Partnership Board. The specifics of these reporting lines will be set out in the partnership agreement, to be drafted in the period April to May 2023. This will be designed in light of the APC's principles:

- Reduction in unwarranted variation in outcomes and access to services.
- Reduction in health inequalities
- Greater resilience across systems. including mutual aid. better management of system-wide capacity and alleviation of immediate workforce pressures.
- Better recruitment, retention, development of staff and leadership talent, enabling providers to collectively support national and local people plans.
- Consolidation of low-volume or specialised services.
- Efficiencies and economies of scale.

7.2 Implementation approach

The implementation model has been developed based on best practice evidence and draws on learning and feedback from the public consultation and external, independent assurance and advice. Our approach has been designed to mitigate the challenges and risks we have heard during consultation and that we have identified during our own implementation planning. Initial planning has informed the high-level approach and details the system-wide key enablers.

Following a formal decision to implement the proposed model of care, the programme will enter a mobilisation phase. A gateway approach will be taken towards mobilisation, with the programme required to pass criteria successfully at each gateway before proceeding to the next.

Table 38 - Gateway approach to implementation

Key **Function type**

- Partnership function
- LNWH function
- LNWH function with partner agreement

Gateway 1	Gateway 2	Gateway 3	Gateway 4	Post launch review
18th April 2023	30th May 2023	31st August 2023	31st October 2023	24th February 2024
Corporate				
FBC approval Stand up shadow partnership following FBC approval	Mobilisation phase Partnership agreement drafted and feedback sought from all partners		Partnership agreement signed off by all partners	100 day review Benefits realisation monitoring and reporting Future planning
Clinical design				
	Theatre allocation agreed	Clinical strategy agreed	GIRFT accreditation application complete	Decision point for six day working
Workforce				
	Substantial appointment to key EOC posts – Medical Director, Chief Nurse, mobilisation manager	Host and partner consultant job planning complete Recruitment trajectory at 40%	Consultant job plans implemented Recruitment at minimum 70% OD and mandatory training underway	
Estates				
Tender complete Contracts ready to be awarded	Enabling works completed Construction commenced		Construction complete 90%	
Comms and engagement				
Initial employee communication with consistent lines Recruitment campaign Detailed communications plan developed with proactive updates on next stages	Ongoing co-design & involvement to shape implementation plans Develop joint branding and patient communications	Ongoing proactive communications to support workstreams Stakeholder engagement and involvement	Formal launch and opening Ongoing patient messaging through social media and digital channels	Review of patient information process

This gateway implementation approach will undergo internal and external review to provide assurance and continually develop from best practice and subject matter experts. The main focus of this peer review will take place during Gateway 3 and 4 to ensure adequacy of plans and identify areas for further development where required.

Internal assurance will be provided by the LNWH Transformation Team and Patient Experience Team to TEG.

Examples of the external assurers that will be used are:

- delivery assurance from NWL Acute Provider Collaborative Board in Common.
- nominated social care lead from local authorities to review plans around discharge planning.
- external clinical assurance and challenge from the medical director of an established GIRFT accredited elective orthopaedic centre.
- early engagement with the GIRFT Accreditation Team.

A Gateway Review Panel will be established, and its membership agreed in April 2023 at an implementation workshop. However, membership is anticipated to draw from the EOC 'shadow' partnership board, senior leadership in all four trusts, internal and external reviewers (see above) and lay partner.

The Gateway Review Panel will meet at each proposed gateway to assess if:

- Workstream milestones – Have the key gateway criteria for each workstream been achieved?
- Quality – Has the project met required standards and best practice so far?
- Risks – Have any significant risks been identified and mitigated that could impact the success of the EOC?
- Budget – Has the EOC stayed within the approved budget?
- Schedule – Has the EOC met the overall agreed schedule at this stage?
- Stakeholder satisfaction – Have the internal and external assurance from peers expressed satisfaction with the progress so far?

Once progress has been assessed against these criteria, the gateway review panel will make a recommendation to the EOC 'Shadow' Programme Board as to whether it has passed the gateway or not. If project has passed, it can then move on to the next stage of implementation. If it has not passed, the review panel may recommend corrective action that needs to be taken before the plan can proceed to the next stage.

A more detailed timeline and key milestones by workstream is described in section 7.3.

Change Management

Our approach to change management as the EOC is mobilised and implemented is described below.

Table 39 - Change management process

Change	Process approval process
Design proposal/changes potentially impacting the: **1. clinical model** **2. workforce model** **3. digital enablement** **4. financial model**	• Workstream lead to review and assess request and determine impact with the project manager. Engage financial workstream lead to assessment cost impact. • Engage wider stakeholders where broader interdependencies, risks or opportunities are identified with a focus on end-to-end pathway care. • Workstream lead and senior responsible officer to make request or recommendation to NWL EOC Development Programme Board, or its successor Shadow Partnership Board, for decision making. • Clinical proposals can be referred and further tested with NWL Orthopaedic Clinical Reference Group (CRG) and/or NWL Musculoskeletal

	Network and/or NWL Clinical Advisory Group before or after presentation to the NWL EOC Development Programme Board, or its successor Shadow Partnership Board.
Day-to-day decisions and changes	• Mobilisation manager to assess impact and risk to the programme, engaging stakeholders and leads as required. Escalate to Managing Director (the host provider SRO) if time critical or risk is assessed as major or above. • Assess cost impact and act according to delegated financial thresholds.
Significant decisions – such directing major exceptions to the plan, halting or pausing significant elements	• Managing Director to assess impact of material changes and present to Shadow Partnership Board to confirm approach, including escalation route depending on nature of matter. • Comply with NWL EOC Shadow Partnership Board directions. • Present to NWL APC Board in Common or delegated cabinet for approval. • Present to NWL ICB for approval where appropriate or advised. Ensure appropriate action is taken with local authority stakeholders and NHS England.

7.3 Timelines and key milestones by workstream

Table 40 - EOC Milestones by workstream

Key **Function type**

- Partnership function
- LNWH function
- LNWH function with partner agreement

Milestone	Date / Deadline	Function
EOC mobilisation and implementation		
Gateway 1	18th April 2023	●
Gateway 2	31st May 2023	●
Gateway 3	31st August 2023	●
Gateway 4	31st October 2023	●
Post-launch review (100 day review and plan for 6-day working)	24th February 2024	●
Workforce		
Develop OD plan	April 2023	●
Recruitment to key posts including EOC Med director, EOC DDN and EOC mobilisation manager	30th May 2023	●
"Active recruitment" trajectory at 40%	31st August 2023	●
Minimum staffing checkpoint for all staffing groups	31st August 2023	●
"Active recruitment" trajectory at 70%	31st October 2023	●
Clinical Design		
Theatre allocation agreement	31st May 2023	●
Host and partner consultant job planning completed	31st August 2023	●
Orthopaedic and anaesthetic consultant job plans implemented	31st October 2023	●
GIRFT accreditation application complete	31st October 2023	●
Education and training strategy published	1st May – 30th June 2023	●
Training time allocated and agreed	1st – 31st May 2023	●

Contracts with Health Education England in advance of implementation developed	1st August – 30th September 2023	●
Application for contract with Health Education England and GMC site recognition	30th September 2023	●
Produce and test standard operating procedures	1st April – 30th September 2023	●
Develop research strategy for sign off by shadow Partnership Board	1st August – 30th September 2023	●
EOC as a distinct unit on Model Hospital	31st October 2023	●
Develop clinical governance framework and test in shadow form	1st September – 30th November 2023	●
Finance		
Develop a minimum data set for EOC financial report	1st May – 30th June 2023	●
Agree templates and terms for cross charging between the four partner trusts	1st August – 30th September 2023	●
Stand up cross-organisational charging arrangements between the four partner trusts	1st – 31st October 2023	●
Set up service line reporting methodology and system	1st – 31st October 2023	●
Develop recurring financial governance arrangements reporting into EOC Partnership Board	1st September – 31st October 2023	●
Support the workforce workstream with regards to recruitment of staff	1st April – 31st October 2023	●
Comms and Engagement		
Proactive internal staff communications & engagement activities to support transfer of staff	1st April – 31st October 2023	●
Development of detailed communications plan across channels and messaging	1st April – 18th April 2023	●
Develop and launch joint recruitment marketing campaign	18th April – 31st October 2023	●
Further co-design and involvement work with lay partners/interested contacts, community partners and others to shape implementation plans (especially transport)	18th April – 31st October 2023	●
Regular updates on implementation to key stakeholders (JHOSC, Local Authorities, Mayor of London etc)	18th April – 31st October 2023	●
Develop and agree joint approaches on patient information and communications including Letters, PALS, Branding, Service directories and websites	18th April – 31st October 2023	●
Proactive communications with Primary Care, GPs & partners		●
Media – proactive general updates	18th April – 24 February 2024	●
Comms plan to support formal launch & official opening event	1 – 31st October 2023	●
Monitoring of patient information process	31st October 2023 – 24 February 2024	●
Digital		
Finalise ICS pre-operative assessment process	March – 31st August	●
Ensure provision of clinical information to enable safe care	March – 30th September	●
Finalise admin flows including waiting list management	April – 30th June	●
Ensure digital inclusion in all processes	April – 31st October	●
Provide staff system access	1st May – 30th September	●
Roll out IT equipment	1st July – 30th September	●
Data protection checkpoints	1st – 30th September	●
Provide staff training	1st October – 15th November	●
Business continuity planning	1st October – 30th November	●

7.4 Project Plan for Construction

A construction project plan has been developed by the estates workstream for the EOC which shows a planned opening date of November 2023 with the key milestones included in Table 39.

Table 41 - NWL EOC Construction Project Plan

Milestone	Date
FBC approval	18th April 2023
Contracts Awards	20th April 2023
Planning consent	n/a
Main construction period	26th May 2023 to 16th November 2023
Construction completed/handover	November 2023
Building operational	November 2023
Opening date	November 2023
Post Evaluation Review (PER) at six months	May 2024
Post Evaluation Review (PER) at two years	November 2025

7.5 Transition planning and mobilisation structure

The design principles for transition and implementation have been approved by the programme board and LNWH Trust executive group are shown in Table 40.

Table 42 - Design principles for transition and implementation

Structures	• Designed to allow transition from 'decision-making' through 'mobilisation' to 'implementation'. • Proposed structure to be sufficiently agile to accommodate change and EOC transition to implementation. • Partnership board (& shadow board) oversees the EOC as a standalone business unit to provide transparency to all stakeholders.
Processes	• Draws on existing 'host provider', PFI processes, and NWL processes where appropriate. • Mobilisation workstreams may adjust to manage transition, reduce risk of silo working and shape towards EOC launch and benefits realisation.
Resources	• Mobilisation resource must be affordable within the EOC financial envelope. • Where appropriate, roles within EOC may be combined with existing posts – to help embed the EOC within the host provider, provide service resilience and to optimise efficiency.

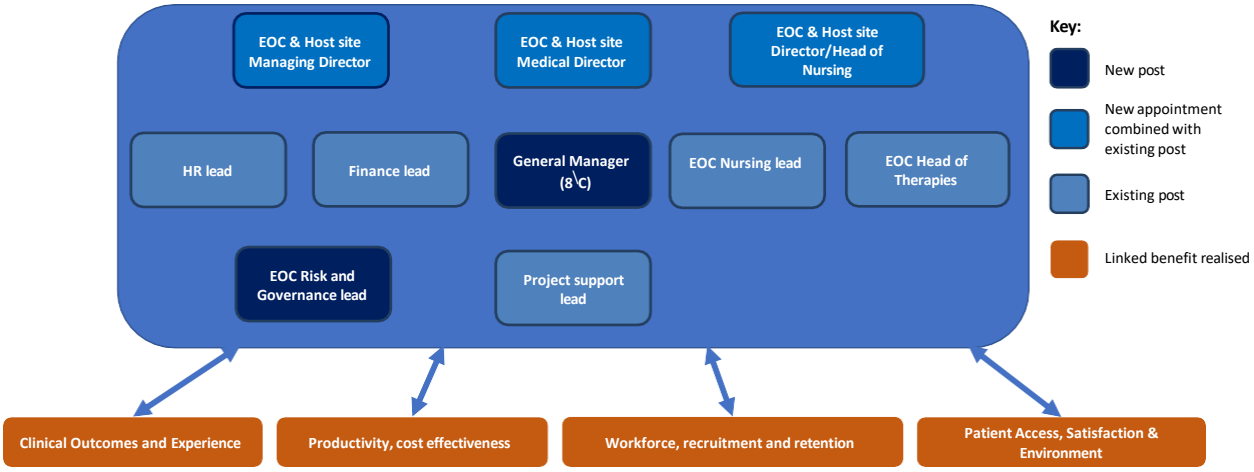
To deliver against the design principles, LNWH has established a fortnightly 'Host Management' workstream that is charged with delivering the transition and implementation plan.

The EOC programme board transitions into a shadow partnership board following FBC approval (Gateway 1) in April 2023 and following the final EOC programme board (April/May 2023), which will approve the TORs for the shadow partnership board.

Proposed mobilisation structure

An EOC mobilisation leadership structure has been developed and approved via the EOC Programme Board and LNWH Trust Executive Board. This structure draws on the above principles and links directly to the four areas of benefits realisation: clinical outcomes, patient access, workforce recruitment & retention and productivity:

Figure 18 - Leadership structure during the mobilisation stage



To provide assurance and drive implementation and delivery, LNWH is proceeding at risk to ensure this structure is in place before the end of April 2023. The managing director, HR lead, finance lead and project support lead are individuals already in post and working within the EOC programme.

The Medical Director and General Manager roles are out to advert, and the recruitment process will continue at risk before the FBC is submitted. Continuity and service resilience is provided by the structure bringing together a mixture of combined, existing and new posts. Agility is a key design principle and as the implementation progresses, this structure will be regularly reviewed at each Shadow Partnership Board to ensure it is sufficiently resourced to deliver against the deliverables and implementation timeline.

7.6 Communications and engagement plan

Continued engagement and involvement with patients, staff and carers is central to implementing the new model of care to better inform development of the EOC and better allow continued improvement.

We have built up a significant volume of insight over the past 18 months about what patients and local communities in NWL want and need from inpatient orthopaedic care and wider MSK services. This has been established through the public and patient involvement activities that informed the development of the initial proposal for an EOC and even more so through the formal public consultation on the proposal and the IIA. We are committed to continuing to build and respond to this insight, to inform both the continued development and implementation of the EOC and supporting inpatient services and the related plans to improve community based MSK services.

It begins with ensuring we communicate proactively and openly with all of our audiences to raise awareness and understanding of what our services offer and what they involve, now and as they change. This will be an integrated approach across the APC hospitals and with community services. Patient information, including patient letters, will have a consistent approach in terms of content, terms, tone and branding, helping patients to experience our care as a joined-up pathway even as they move between their home orthopaedic hospital and the EOC. We will also ensure that information about travel support options, follow-up care and help with queries or concerns as well as feedback prompts are widely publicised and consistent. This will be made accessible to non-English speaking patients through CMH's language services (see section 7.16).

We then see the diverse contacts and relationships we have made through the engagement and consultation work to date as being central to continued engagement and involvement on inpatient orthopaedic services and wider MSK care. We propose doing that in the following ways:

- Inviting the 200 plus people who took part in the consultation and who gave us permission to keep them informed – as well as the community organisations who supported us with particularly in reaching individuals not generally engaged with our services – to take part in involvement activities through a regular email update about the project (and wider MSK service improvements).

- Continuing to include lay partner roles in the governance structure for implementation (including oversight of ongoing involvement plans, Gateway Review panel and patient and community feedback and experience indicators).
- Developing an iterative plan, employing a variety of methods, for expanding our understanding of patient and community needs and views to inform the further development and implementation of the EOC and related care pathways. The iterative plan (plus the insights and responses to those insights) to be overseen as part of the main project governance for implementation and for onward, continuous improvement:
    - ad hoc co-design workshops for specific elements of implementation, for example, transport options
    - patient panels – for feedback via email, for example, on patient information
    - surveys
    - focus groups
    - continuing to triangulate existing sources of patient feedback and insight.

Through developing this implementation plan, we have involved patients including:

- Decision-making – the public consultation allowed us to identify 200 plus individuals to take part in involvement activities as the EOC moves through implementation gateways
- Patient engagement – we plan to involve patients and other stakeholders from diverse backgrounds in our working groups and implementation processes to ensure their perspectives and needs are taken into account.
- Co-production - we will be using co-production methodologies during our implementation workshops and working groups (e.g. transport) to ensure that patients and other stakeholders are actively involved in the design and implementation of our initiatives
- Patient representation – we will be inviting lay partners to sit on the EOC partnership board to ensure that we have a diversity of voices at the highest level of our governance to provide insights and perspectives on the health and care needs of the NWL population
- Patient advocacy – patients will continue to be advocated for through ongoing communication and engagement with the NWL Joint Health Overview & Scrutiny Committee (JHOSC)

This communications and engagement plan will be co-developed further by the corporate workstream at an LNWH implementation workshop in April 2023.

7.7 Clinical implementation

7.7.1 Theatre model and schedule for delivery of care

The chosen option is that the clinical model will be delivered at the Central Middlesex Hospital site which will be expanded to five ‘state of the art’ laminar flow operating theatres with ring-fenced bed capacity. Currently LNWH operates three theatres at CMH to deliver elective orthopaedic surgery including some day surgery cases. This includes patients assessed as ASA 3.

This theatre model should ensure that clinicians from each trust can ensure continuity of care through consistent access to theatres while allowing their teams to manage their respective patient waiting lists to ensure inequalities are not worsened.

The chosen option has been developed to maximise the benefits of the EOC without destabilising LNWH. LNWH will use one theatre at the CMH to provide ASA 3 and day case surgery. Each of the acute providers will assume the running of one of the other four theatres each day to deliver planned ASA 1 and 2 patient activity in the EOC. This will allocate two operating theatres to LNWH each day and one each to Chelsea and Westminster Hospital NHS Foundation Trust, Imperial College Healthcare NHS Trust and Hillingdon Hospital NHS Foundation Trust.

Perioperative care of patients will be the responsibility of the EOC team including nursing staff, junior doctors and therapists. On call and out of hours consultant surgical and medical cover will be provided by the LNWUH rotas supported by SOPs for escalation where necessary.

This allows efficiencies of scale; bringing teams from across NWL on site together as a step to closer working, improved quality and safety outcomes; allowing for the development of regular processes, routines and teams working together.

An SOP for the theatre model and schedule of use will be developed at an Implementation workshop in April by the clinical design workstream with an approach to monitoring and distribution of theatre sessions.

7.7.2 Managing the unwell patient

As a well-established stand-alone elective site, the mechanisms to manage unexpected deterioration are well tested and embedded on the CMH site. Based on this existing approach, a protocol-driven model of peri-operative care will be delivered, with standardised anaesthetic and post-operative analgesia regimes. Post-operative patients will remain the responsibility of orthopaedics with anaesthetics providing advice on pain management and help with the deteriorating patient.

The existing Enhanced Care Unit (ECU) on CMH is led by anaesthetics for patients needing higher levels of care, under an existing standard operating policy (SOP). It is not anticipated that the ECU will be required for EOC patients because of the patient selection criterion (ASA 1 and 2), however all these safety features will be available to all patients having operative procedures at the new centre.

Within the EOC, a Post Anaesthetic Care Unit (PACU) has been developed for patients who require additional monitoring, for example patients with home continuous positive airway pressure (CPAP) machines. The SOPs will be closely based on the pre-existing Abbey Ward PACU SOPs.

7.7.3 GIRFT accreditation

To understand the impact of surgical hubs, Royal College of Surgeons (RCS) England with GIRFT has launched a pilot Elective Hub Accreditation Scheme[17] during the second half of 22/23 with seven pilot hubs. The scheme allows trusts to seek formal assessment of their hub sites and external recognition that they work to a defined set of clinical and operational standards. This accreditation scheme goes beyond the surgical hub definition used by the Department of Health and Social Care.

There are 5 domains containing a total 99 criteria of which 41 are deemed essential for all accredited hubs. The application process requires an application, site visit and review by panel. The process is designed to be simple with a minimal assessment burden to accreditation.

Table 43 - EOC design in alignment with GIRFT surgical hub accreditation

GIRFT Elective Hub Domains	NWL EOC DMBC design
1. The Patient Pathway	Both the EOC clinical model and the wider MSK pathway (Section 4.7) have been created with input from GIRFT standards
2. Clinical Governance	Chapter 7 documents our approach to EOC governance
3. Utilisation & Productivity	Section 7.10 sets out our benefits realisation plan with metrics to meet these
4. Facilities & Ring-Fencing	Section 4.8 sets out how and why the preferred option site was selected to protect EOC activity
5. Staff & Training	Section 7.9 documents our workforce model for the EOC and training plans

The NWL EOC model has been designed with the ambition to achieve accreditation by meeting the 41 essential criteria that demonstrate a commitment to quality clinical care and training (see table 41). We intend to submit an application to GIRFT as an integrated hub in advance of the EOC opening in November 2023. Assessments and site visits would be expected to take place in early 2024, with successful accreditation expected towards the end of 2024.

[17] Elective Surgical Hub Accreditation Scheme, GIRFT – November 23rd, 2023

7.8 Transport implementation

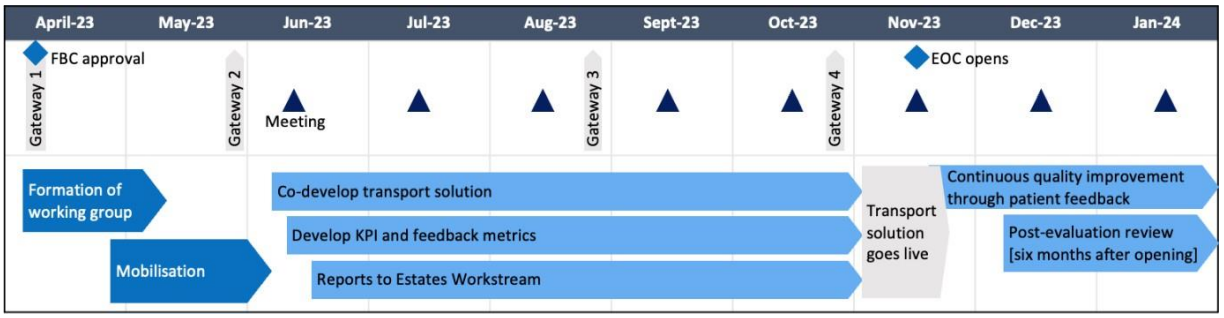
The transport solution, described in section 4.9, has been designed to provide information and facilitation to all patients attending the EOC for their operations, with transport being made available at no charge for any patients facing a long, complex, or costly journey to the EOC. This section outlines our agreed approach to implementation of that solution and will be fully developed through the implementation phase in readiness for go live.

We have already identified the patients and stakeholders that are likely to be affected by this transport solution and have consequently incorporated them into our co-design approach. Following the approval of the FBC, a transport working group will be established in April/May 2023. The purpose of this group is to develop the transport solution that has been endorsed in the DMBC to ensure that it works for the NWL community. During the mobilisation period its membership and terms of reference will be established. Within the working group we propose two components: an advisory group and a task and finish sub-group.

The advisory group would include members proposed at the NWL ICB Board Meeting in March 2023. The task and finish group would meet more frequently with membership drawn from patients and carers, staff and other key stakeholders to support the aims of the advisory group.

The transport working group will meet regularly to evaluate progress towards the collective goal of a transport solution that is ready and tested for the EOC opening in November 2023. This group will report into Estates Delivery workstream.

Figure 19 - NWL EOC transport working group



We will undertake pilot testing of the transport solution to ensure that it meets the requirements of patients, providers and other stakeholders while operating as intended. This will include collecting qualitative feedback from patients on their experience, reviewing patient attendance data, and uptake of the proposed solution. These metrics are new and will be developed by the transport working group (see appendix 11).

The EOC team including the care navigator roles will be aware of the travel support available to patients and the associated resources so that they feel confident about how to support patients to navigate their pathways.

The development of travel information, facilitation and travel solution will be monitored through implementation and feature in the gateway assurance framework. The transport solution will be improved continuously through quality improvement initiatives based on feedback from stakeholders, emerging technology solutions, and as the EOC is fully embedded in NWL's health and care system.

7.9 Workforce implementation

7.9.1 Workforce vision

NWL ICS has set out a People Plan with a commitment to a workforce vision, values and behaviours they will uphold and the actions they will take. The vision is set out below.

Our people are able to provide great care for our patients and communities because they have the skills, tools and capacity to do their jobs and the environment they work in is inclusive and supportive. Staff are motivated and engaged and have opportunities to grow, develop and innovate.

The vision has five collective goals: to Care, Lead, Include, Grow and Transform.

To support the achievement of the People Plan goals, the APC has set out its People Priorities for:

- Safe and sustainable staffing to reduce vacancies, turnover and premium rate temporary staff.
- Workforce redesign to support new models of care and new ways of working.
- Maximising the use of new roles.
- Developing the collaborative as a great place to work and London's acute employer of choice.
- Improving HR service effectiveness, efficiency and impact.
- Building more equitable and fair organisations (across the NWL ICS)
- Improving the health and wellbeing of our staff (across the NWL ICS).

The workforce model for the EOC forms part of the APC's initial priorities, under priority two, workforce redesign. This will align with the Transform pillar of the NWL People Plan and equip the workforce with the skills and structures to deliver new clinical models of care; operate in agile ways using technology; and transform operating models for support services.

The developing workforce plan for the NWL EOC aims to:

- make a significant difference to our ability to recruit and retain staff by making the NWL EOC and base hospitals desirable and innovative places to work for relevant staff, including training and non-training medical staff (including GPs), AHPs and nursing staff.
- enable productive working by enhancing digital capability and developing consistent pathways.
- utilise processes that are in existence (portability agreement) and being developed across NWL to build flexibility and mobility. This would allow staff to work in different organisations and locations, particularly orthopaedic surgeons, anaesthetists and other relevant clinical staff who would follow the patient between base hospitals and the proposed elective centre.
- develop consistent ways of working together with NWL-wide clinical protocols driven by the orthopaedic network.
- decrease the unsustainable strain on clinicians by increasing the level of cover to recognised standards.
- improve training opportunities for junior clinicians through greater access to specialists.
- reduce sickness and absence rates with a decreased workload reducing stress and tiredness.
- develop new roles where appropriate, which are likely to include advanced clinical practitioners and care navigators.
- reduce the use of bank and agency staff through more effective cover of the rotas through existing staff.
- deliver on the vision of 21st century care set out in the NHS Long Term Plan by reviewing skill mix, creating new types of roles and utilising different ways of working.
- develop training models in partnership with Health Education England (HEE) that ensure undergraduates have access to the highest quality education and training.
- ensure there are no unintended consequences for interdependent staff groups and services such as trauma, paediatrics and spinal.
- develop NWL support networks including system-wide multidisciplinary team.
- working structures and defined escalation pathways to access clinical expertise for complex patients.
- develop a NWL-wide recruitment strategy for orthopaedics.

7.9.2 Workforce capacity and capability

The workforce model has been developed collaboratively with the multidisciplinary service leads, built up on activity modelling and outcome requirements that deliver GIRFT standards for all patients, following GIRFT Best Practice Pathway and NICE guidance. The workforce model will be reviewed throughout the development and implementation of the workforce plan to ensure that it remains the optimal model to deliver the desired outcomes.

The roles and WTE numbers of staff for the proposed workforce model have been designed and quantified.

Table 44 - Staffing requirements for November 2023 opening

15 Administrative and Clerical	**21 Allied Health Professionals**	**20 Consultants**	**4 Management**
22 Medical (Non-Consultant)	**194 Nursing**	**2 Pharmacists**	**279 Total**

Table 45 - Predicted staffing position for November 2023, based on being able to recruit to pre-existing vacancy levels across the staff groups (accounting for existing fill rates)

11 Administrative and Clerical	**18 Allied Health Professionals**	**20 Consultants**	**3 Management**
22 Medical (Non-Consultant)	**152 Nursing**	**2 Pharmacists**	**228 Total**

We have estimated the EOC staffing position for November 2023 using the current vacancy rates across all staff groups. Based on this estimate there will be a temporary staffing requirement of 51 WTEs to meet the staffing requirements for November 2023 opening of 279 WTEs. There is an average fill rate across medical and nursing in T&O of 90% across NWL. Therefore, specific focus will need to be given to developing the temporary staffing pool to support the substantive workforce. Recruitment exercises will continue to be run to build a sufficient pipeline to move towards the 336 WTE requirement for 1st April 2024.

The proposed staffing model for the EOC will consist of a single team at the NWL EOC preferred site, doctors rotating to support the transferring patient activity and there will be consideration of rotational posts for specialist or hard to recruit roles.

Although it had been anticipated in the PCBC that there would be transfer of staff with the transferring activity, having analysed the workforce data returns, we have been unable to identify an organised grouping of staff whose principal purpose is delivering the transferring activity, so at this point we do not anticipate a requirement for staff to transfer employers. Instead, staff (not including doctors) currently delivering the activity within one of the 'home' trusts, will remain in their post and will be given the opportunity to apply for a role at the EOC (the process for this is being developed).

As there will be orthopaedic surgery remaining with home trusts undertaken by their staff and plans being developed to utilise existing capacity, it is not expected that any redundancies will be required. We will continue to engage with staff throughout the implementation phases and should an organised grouping of staff be identified whose principal purpose is delivering the transferring activity, then those staff identified will transfer with the activity to the EOC host under the protections of a 'TUPE transfer'. Should there be any proposed changes for staff, there will be formal consultation with those staff directly affected. This would most likely be from May 2023, following any approval of the FBC.

There is, therefore, an expectation that there will be a greater reliance on direct recruitment to staff the EOC.

The staffing risks grow for the EOC host with an increased requirement for direct recruitment and they decrease for 'home' trusts who will be able to strengthen their staffing position.

Impact on residual services

Chelsea and Westminster Hospital NHS Foundation Trust (CWFT)

Local ASA 3 and 4 and day cases activity will continue to be delivered at CWFT. There is a small risk that should consultants not want to move with the transferring activity they could choose to take up posts elsewhere, which would have an impact on residual services. There will need to be a review of the impact on medical rotas to ensure that residual services are not negatively impacted.

Imperial College Healthcare NHS Trust (ICHT)

Local ASA 3 and 4 and day cases activity will continue to be delivered at ICHT, with the Charing Cross site being potentially designated as the major revision centre for the sector. There are not considered to be any risks around staffing to deliver this activity within T&O directorate, but strain could be placed on theatre nursing teams.

London North West University Healthcare NHS Trust (LNWHT)

Local day cases and ASA 3 will be delivered adjacent to the NWL EOC with ASA 4 activity delivered at Northwick Park Hospital. No risks have been identified around staffing to deliver this activity.

The Hillingdon Hospitals NHS Foundation Trust (THHT)

Local day cases will be delivered at MVH with ASA 4 activity undertaken at HH. Many of the staff currently delivering the transferring ASA 1 and 2 activity are doing so as a small proportion of their role. It is unlikely that they will transfer with the activity. Some of these staff will be specialists (therapy staff). There is the potential risk that if the repurposing of the released capacity is not within a specialism of interest to them, they may choose to take up new roles elsewhere that are more attractive to them. Should this risk materialise, resulting in an increase in turnover of AHPs (hard-to-fill), this would impact on the ability to run joint schools, manage ASA 3 and 4 activity and day cases remaining on-site and potentially impact wider developments to increase weekend occupational therapy and physiotherapy.

The retention of day case activity (the largest proportion of activity undertaken) could provide an opportunity to direct resources to address both growth and the PTL (that is, waiting list) backlog, offering services that are aligned to the special interest of any affected staff. Rotational posts will be explored as a potential solution, but there is a risk that the distance between THHT and CMH may mean that the posts are not as attractive.

Overall, it is expected that trusts (ICHT, CWFT and THHT) will strengthen their staffing position supporting residual services as:

- there are current vacancies across the staff groups which will be transferred to support ASA 1 and 2 activity (to be recruited into)
- where small proportions of roles are currently utilised to support delivery of ASA 1 and 2 activity, it is unlikely that these staff will transfer with the activity, thereby enabling trusts to strengthen their staffing position and supporting the repurposing of capacity.

As highlighted above for THHT, the likely strengthening of staffing positions for residual services could provide an opportunity to redirect resources to address growth and waiting list backlog at all of the provider trusts.

7.9.3 Recruitment and retention

It is expected that the majority of staff will be directly recruited to the EOC by LNWH. As it has not been possible to establish an organised grouping of staff, at home Trusts, whose principal responsibility is the transferring activity, staff will be able to apply for a role in the EOC.

Inclusive recruitment practices introduced/developed as part of the NHS People Plan in 2020 will be reviewed across the trusts, to evaluate their impact. All vacancies will be promoted in the local community or through community channels, to ensure the adverts reach a diverse pool of candidates. Selection panels will be diverse, and members will have had appropriate training. These are some of the interventions that evidenced contribution to organisational culture change in a report by NHS Employers

and commissioned by NHS England and NHS Improvement on Inclusive Recruitment – Leading Positive Change (April 2021).

We plan to work with an agency to support the design of a dedicated recruitment campaign for the EOC. This will include the identification of innovative ways of recruiting to key roles. Specific recruitment plans/specialist campaigns will be developed for the gaps identified in each staff group for the agreed workforce model. Delivery will be aligned with the People Priorities being developed for the acute provider.

We will hold a number of open days for nursing and AHP roles starting from April 2023, seeking to advertise the AHP open days in universities giving the opportunity to appoint to Band 4 student posts while they await their Health and Care Professions Council registration/exam results. We also have a strong reputation of attracting our third year student nurses after graduation to substantive posts.

We also run an apprenticeship programme for nurse associates with an established pipeline of graduates who start their career at LNWH. We are also incorporating a rehabilitation assistant role into the EOC wards to support early mobilisation and discharge. We also plan to explore the ongoing international nurse recruitment across the acute trusts to support the recruitment pipeline for the EOC.

There will be groups of staff retained by provider trusts, who will rotate to the EOC to undertake the transferring patient activity. This will apply to doctors and will be explored for hard-to-fill and specialist roles. Staff currently involved in delivering the transferring patient activity will be given the opportunity to express their interest in taking up roles in the EOC. This process will run concurrently with the external recruitment campaign.

Developing new ways of working across the system is crucial to developing a sustainable workforce model that builds local capacity, capability and competency to deliver care across end-to-end best practice MSK pathways.

The new model will provide opportunity to attract staff to NWL, together with challenges recruiting to a number of key disciplines.

The clinical model will enhance training opportunities, resulting in improved skills across the workforce and improved recruitment and retention. All trusts have been asked to review existing staffing gaps and ensure recruitment activity is paced up locally to support the transition to the new centre to strengthen and maintain sustainable staffing levels. The APC will also explore possibilities for joint recruitment campaigns for key staff groups. It is likely that recruitment will commence at pace to secure staffing for future gaps identified in the following staff groups:

a) post-anaesthesia care unit (PACU) nurse qualified
b) advanced nurse practitioner
c) qualified ward nurse
d) consultant anaesthetist
e) consultant orthopaedic surgeon
f) physiotherapist
g) radiographer
h) theatre nurse manager with orthopaedic experience

The biggest gaps in the existing workforce are for qualified nursing as well as administrative, while other roles are known to be ‘hard-to-fill’. Consequently, as well as exploring all conventional routes to recruitment we will, through the NWL Health Academy, utilise, develop and design training and skills programmes with the partnership skills providers to upskill existing staff and consider the use of alternate roles. There are a number of courses currently available ranging from diploma to Masters level across nursing; physician associates; MSK ultrasound; advanced clinical practice; physiotherapy; operating department practice; and a number of entry level apprenticeship courses.

Retention

Retention is one of the key priorities in the APC people priorities. Initiatives are being explored to retain staff within NWL, which will support the strengthening of staffing levels across the system.

Retention initiatives and reviews of workforce pressures will be considered across the pathway to ensure that specific actions (for example recruitment and retention plans, employee experience) are undertaken in a coordinated manner to avoid damaging recruitment and retention in different parts of the pathway.

The concerns raised through the public consultation around loss of staff as a result of travel/multi-site travel issues, will be largely mitigated by the fact that apart from doctors it is expected that the majority of staff will be directly recruited by the host, with others given the option to apply for roles.

Development of relevant apprenticeship posts, rotations, new roles for internal development (for example advanced care practitioners) will provide a greater opportunity for staff to develop and maintain skills across the pathway which will also support staff retention.

Options for flexible working will be made available for staff regardless of their role. The anticipated operating hours will provide an opportunity to offer staff more flexible working patterns and we will explore opportunities for colleagues from all professions who have recently retired to return to practice in the EOC.

Vacancies and retention are monitored by each of the People Committees within the Acute Collaborative and at the broader APC People Committee. The metrics within the Trusts and the APC Committee will be used to monitor the impact of the recruitment to the EOC and to identify at an early stage whether any interventions are required.

Temporary staffing
We plan to review and continuously monitor the temporary staffing pool across all staff groups to understand the capacity and likelihood of being able to supply the support required to the EOC. This will enable us to make any necessary interventions to build or develop the temporary staffing pools across all staff areas. We will be able to utilise the collaborative bank for nurses, which will enable a streamlined path to take up shifts in the EOC – further work will be undertaken to increase the number of nurses taking up shifts on the collaborative bank and we will be working on marketing material with communications teams across the four trusts.

Temporary staffing shifts for staff outside of medical and nursing are taken up through local banks, with use of agency. We will need to make sure the pipeline for these staff is sufficient within the host systems. There are good fill rates across administrative and AHPs, with the latter pipeline generated via agency.

7.9.4 Teaching, training, education and research at the core of the clinical quality

This innovative model of surgical hubs has been shown to offer significant opportunities and benefits for the teaching, training and education of key clinical staff, including doctors, nurses and therapists. Consolidating large volumes of routine elective surgery allows for excellent whole team routines, skills and relationships to be developed that enhance the training environment and make care consistently more efficient and safer. Attention to training, education and research will drive the culture, behaviours and expectations necessary for a high performing centre of excellence. This approach directly supports safe and high-quality care. We will emphasise staff development and career progression initiatives, including supporting staff who have not undertaken higher education. This will be achieved using our careers escalator and leveraging our competency framework that allows staff to receive a higher education qualification.

The EOC will be a protected facility dedicated entirely to elective care, with ring-fenced resources that allow them to stay active even when emergency pressures rise. These hubs are now seen as a key resource for more robust and sustainable elective services, backed by bodies such as NHS England and the Royal College of Surgeons of England.

Surgeons in training
Training is at the core of good care and the provision of an expert workforce for the future. Orthopaedic specialty surgical trainees will work and operate with and under the supervision of their normal clinical supervisors as part of the home trust surgical team, travelling to the EOC for theatre operating sessions.

The development of the NWL EOC was discussed and supported by the national Specialist Advisory Committee for Trauma and Orthopaedic Surgery, the body with delegated authority for training in trauma and orthopaedic surgery on behalf of the Joint Royal Colleges of Surgery and the Joint Committee for Surgical Training. The model and proposal is endorsed and felt to offer significant opportunities for improved training. Recent data shows that trainees and training in trauma and orthopaedic surgery have been disproportionately affected by the COVID-19 pandemic and reduced elective surgery volume. The specialty has the largest proportion of 'outcome 10' assessments at trainee annual competency assessments, where trainees have not been able to achieve the expected standards of operating because of the impact of the COVID-19 pandemic. The EOC will offer an important solution for this problem in NWL and will provide future trainees with high volume training in a supervised high volume performance environment.

This support is caveated with the requirement for the EOC to be designed and established in line with the GIRFT accreditation criteria which put training at the heart of the centre. The NWL ICB have made this commitment which will benefit clinical training for all specialties and will also support high-quality care.

Table 46 - GIRFT 'high volume low complexity' (HVLC) criteria for staff and training

Headline criteria	Core elements of headline criteria	What we will be looking for	Evidence	CQC KLOE
1. Dedicated & ring-fenced clinical and operational teams	1a. Robust clinical staffing model	• Clear rotational or permanent clinical staffing model in place • Staff vacancy rates are low • Hub has, or aims for, 80% substantive staff across all staff groups and on a rolling monthly basis • Hub review the number of additional hours that staff work to ensure staff well being	Self-certification Rotas Vacancy data Copy of plans	Effective
	1b. System in place to enable staff to work effectively at hub sites and to move efficiently between hubs	• Passporting process & rotational models fully embedded • Induction processes are in place for all staff, including these from other sites and visiting clinicians	Related policies Conversations with staff during site visit Self-certification	Effective
	1c. Robust ring-fencing applied to hub staff	• Chief Executive/Exec Tripartite decision required for breaking of ring-fence of hub staff • Winter/emergency pressures plans in place to avoid hub cancellations	Self-certification Conversation with staff during site visit Copy of plans	Effective
	1d. Effective strategy to address future staffing issues & robust staff management processes	• Plans to address recruitment and retention in place (e.g. networking with neighbouring hubs, rotational or innovative posts) • Plans for sole-development and ongoing training • Robust staffing processes such as appraisal, disciplinary etc.	Self-certification Copy of approach and results Copy of plans Copy of policies	Safe
2. Supported training of junior doctors & wider MDT	2a. There are regular, scheduled, training opportunities at the hub for junior doctors, including fellows	• Dedicated training operating lists to agreed GIRFT rations (e.g. 8 cataracts per training list v 10 non-training list)	Example theatre lists Model hospital data Conversations with staff during visits	Effective

	2b. Hub staff offered regular, relevant continued professional development (CPD) opportunities	• Systematic training opportunities in place for relevant hub staff	Training records	Effective
3. Strategy & approaches that promote staff well-being	3a. Staff have access to necessary basic facilities and services	• There is sufficient parking and transport arrangements for staff not permanently based at the hub • Staff access to a dedicated area for breaks/lunch • There is lockable storage and changing facilities are available for hub and non-hub staff • Smart card/relevant logon information for staff not permanently based at the hub is collected in a timely way	Observation during visit Conversations with staff during site visit Self-certification	Effective
	3b. Staff feel safe in their work environment	• Necessary estates safety checks carried out • Outdoor areas and parking is well lit	Self-certification Observation during visit	Effective
	3c. Staff feel valued and respected in their work environment	• Evidence of regular engagement with staff at all levels with evidence of actions taken to address suggestions and comments • Good levels of staff satisfaction	Self-certification Examples of impact Vacancy, sickness and turnover rates Trend data	Effective

Anaesthetists

The large volume of joint arthroplasty provides significant opportunities for the development of skills and training in regional anaesthesia as well as general anaesthesia in a fit and healthy (ASA 1 and 2) patient population. The clinical workstream team will explore with the School of Anaesthesia for Health Education England how these opportunities can be best developed and used.

Allied Healthcare Professionals (AHPs)

In addition, the EOC offers considerable opportunities for training and to develop real expertise and confidence for nurses, theatre operating department practitioners, physiotherapists and other AHPs. Clinicians have the opportunity to grow and develop in conventional roles working in a specialist environment or to develop advanced skills working more broadly in extended roles that support this innovative pathway such as advanced nurse practitioners supporting ward care, reporting radiographers, consultant or advanced practice therapists.

Sharing best practice

In addition, the volume of clinical work undertaken in the EOC provides opportunities for clinicians from home trusts and community partners to undertake placements at the EOC to develop their understanding of the whole patient pathway. It also provides opportunities to upskill and to develop competences and confidence that can be shared across providers to improve the clinical skills, knowledge and quality of care across NWL.

Research

Consolidating large volume elective work and expert clinical teams presents real opportunities for the EOC to lead and develop research programmes of work that will have meaningful impact for patients undergoing treatment for MSK procedures. The acute trusts are well placed to support this with excellent links with Imperial College and the new MSK laboratory in the Sir Michael Uren Building at the White City Campus.

Investing in our staff

Placing training and research as a core element and expectation of everything that we do will encourage the EOC to continue to: aim for the highest standards; to remain reflective and responsive to change; progress and challenge; and embrace true multidisciplinary working. Trauma and orthopaedics education and training is a key dependency whose implications need to be worked through in a collaborative way as part of the development and implementation of a new clinical delivery model. Our commitment to provide an excellent environment for training will help to make the EOC a great place for all to work, supporting our recruitment, retention and staff wellbeing. The positive impacts of all of these for patient safety are well recognised.

7.9.5 Working arrangements

Consultant job planning

Consultants will be required to have updated job plans in place to support the NWL EOC via existing portability agreements, while doctors in training, as in the SWLEOC model, would continue to be aligned to the home hospitals. Doctors in training should then follow their consultant to the proposed elective centres on their consultant's operating days to get their required exposure to elective cases.

Consultant job planning will be aligned with training junior doctors to ensure the delivery of high-quality education, training and supervision. It is intended that travel between sites in a single day will be avoided.

Consultant job plans will remain the responsibility of home trusts with a recharge mechanism for sessions allocated to the EOC. Oversight by the workforce workstream and shadow partnership board will be an important function to ensure all Trusts achieve the Gateway 2 requirement to complete job planning by 31 August 2023.

Each Trust will initially be asked to job plan both consultant surgeons and consultant anaesthetists into a two-session theatre list a day (08.30 to 16.30). This will be on the basis on a standard 42 weeks per consultant per year contract. Annualised job plans will be used between consultants and home trusts to ensure that utilisation is maintained in line with GIRFT best practice.

The centre aims to move to full six-day functionality by 1st April 2024 at the latest to meet GIRFT best practice. To enable this, we will undertake a 3 month post opening review (100 days) in February 2024. This review will include a plan and decision point (DP) to move to six-day working.

Where possible home Trusts should job plan to six days (Mon-Sat) but it is recognised this does not reflect current working arrangements in NWL. Remuneration/recharge will be based at 2.5 PAs per full day list (to reflect time spent seeing patients pre and post operatively) with an uplift of 0.5 to reflect proportionate SPA activity within a standard contract.

No further direct clinical care sessions need to be job planned by home Trusts as the clinical model provides for perioperative care from within EOC staffing. In addition, LNUWH will job plan to accommodate its day case and ASA 3+ work.

Each Trust will be expected to fill gaps in anaesthetic cover due to annual leave or sickness within their own workforce. Where this is not possible mutual support will be required and this will be coordinated by the EOC as far as possible but will remain at risk. Where cover at premium is required, the additional cost of this will be apportioned on a pro rata basis to Trusts on the basis of nominal 42-week provision.

There will be the facility to allocate theatres vacated by annual leave or sickness through a standard 6-4-2 process. EOC 6-4-2 will be part of LNWH standard 6-4-2, and then shared via common Cerner, CCS and EOC Teams channel across partner Trusts.

The home Trusts will be required to complete job planning for consultants involved in the EOC by end 31 August 2023. This allows a minimum of a 3-month period prior to EOC opening in November 2023. Job plans will be in place by 31 October 2023 to facilitate the opening in November 2023.

Doctors in training

Initial conversations have taken place with HEE and we will continue to liaise with HEE in the development of the training model to ensure training requirements are fully integrated into delivery plans. The presumption is the EOC would function without any reliance on overnight or ward-based support from trainees in home trusts.

Junior doctor support is likely to present challenges with regards to rota management and service provision and these will be addressed in detail within any education and training plan developed by providers.

7.9.6 Staff experience

The APC is currently reviewing the following opportunities where people improvement objectives may benefit from a collaborative approach. These are:

a) a joint programme to improve staff engagement and experience across the group
b) an employee value proposition
c) optimising the use of diversity data to drive and track improvement
d) de-biasing our HR processes and procedures
e) improving the progression of our colleagues with protected characteristics.

We aim to share and spread the best Equality, Diversity and Inclusion (EDI) practice within the APC, including EDI education and leadership programmes.

Should the proposal be approved, we plan to engage with staff to understand what we can introduce to make the EOC a desirable place to work.

The EOC will be designed in line with best practice staffing ratios, which should create a better environment for staff to work in. Staff will be encouraged and find it easier to take their breaks and rest.

We plan to review the provision of wellbeing support across the acute collaborative and identify areas/initiatives where pooling resource or sharing access could be achieved and would create benefits across the collaborative. Work is already in progress on a shared approach to financial wellbeing. The theatre build will include high quality dedicated staff rest areas (see appendix 13 for images).

We plan to embed a learning culture where all team members are actively encouraged to suggest ideas for improving efficiency and outcomes.

We plan to monitor the outputs from the staff survey to gain insight into staff experience at the EOC, comparing against wider T&O services and overall staff survey outputs. This will enable us to make the necessary improvements to ensure that the EOC is a desirable place to work.

7.9.7 Workforce implementations

Workforce engagement

The clinical model has been led and developed by senior clinicians from across all four acute trusts and the ICB. Much wider and deeper involvement will be essential as the implementation phase moves forward. So far, wider staff groups have been kept informed and have been able to raise concerns or questions with their managers, contributed via engagement sessions and informed via a dedicated email[18].

We are developing an ongoing programme of involvement for all staff who work in orthopaedic surgical and related care so that they can help shape the final SOPs and help develop the implementation plan and beyond.

[18] nhsnwl.eoc@nhs.net

Following the public consultation, we are holding monthly sessions to be led by trust programme leads and supported by workforce leads. Workforce leads meet with staff side representatives to discuss and keep them updated on the proposal and staff side are invited to the monthly sessions. To improve attendance and reach staff who cannot attend, we will be actively promoting these sessions to staff through existing communication outlets and sessions, with recordings being made available via the intranet and local systems. We will continue to provide regular updates via pre-existing directorate meetings.

7.10 Expected benefits of the model

Benefits realisation plan (BRP)
Successful implementation of the proposed service change would deliver improvements to both the people receiving elective adult orthopaedic services in NWL and for the staff delivering them.

A framework has been developed to monitor benefits realisation with the ICB and four acute trusts. This includes KPI themes, metrics, improvement targets, and expected milestones for achievement. The Benefits Realisation Plan (BRP) is shown in appendix 11.

All of the KPI themes within the BRP have been reviewed by programme board to ensure the baseline and target metrics remain valid and the trajectories continue to be achievable.

Table 47 - Key categories of benefits

Benefit description	Expected benefits
Clinical outcomes and experience	Improved patient satisfaction. Reduced burden on primary care.
Patient access	Improved patient satisfaction.
Productivity	Improved productivity.
Cost-effectiveness	Better use of resources.
Transport	Reduced numbers of patients who do not attend. Improved access to patient transport system. Improved patient satisfaction.
Patient satisfaction	Reduced number of complaints. Issues raised as part of complaints requiring action are addressed. Improved qualitative assessment.
Workforce	Low vacancy rates and low turnover.

The purpose of the benefits framework is to:

- describe the set of productivity and efficiency, quality and operational benefits we expect to achieve through the implementation of an EOC for NWL and how a subset of key indicators can be quantified
- demonstrate the impact of the changes to services in NWL to the public, commissioners and providers
- provide a focus for all stakeholders during and post-implementation, to monitor the value and to ensure the reconfiguration is delivering the changes required
- describe specific and measurable performance indicators, which directly link to benefits
- enable the realisation of the programme's benefits which will be monitored at a system and EOC level
- provide an early warning system for the programme to take remedial action if the achievements are not as expected and to address any issues arising.

Patient experience
As part of the implementation of the EOC and to assess the effectiveness of the new approach, the team is developing a comprehensive set of measures of service quality and accessibility from the patient's perspective. The measures outlined below will supplement existing business as usual processes including the Friends and Family Test (FFT) and review of patient complaints which will provide a broader assessment of the patient's view of service quality for the EOC for all of the NWL hospitals providing planned orthopaedic care.

There will be a consolidated set of metrics and analysis comprising baseline and targets including the following:

- FFT scores, which provide a service/site/ward-based assessment for the EOC and the other NWL hospitals providing planned orthopaedic care in respect of other elements of the pathway (pre-admission to and post-discharge from the EOC)
- volume and nature of patient complaints for the EOC and the home hospitals.
- bespoke and focused qualitative patient survey for the EOC
- targeted patient transport impact analysis, which was identified as a particular area of concern in the Public Consultation Report, as described below:
  a. Qualitative patient feedback focused on patients who live more than 45 minutes away from the proposed location of the EOC.
  b. Analysis of the profile of patients who do not attend (DNA) by postcode and age to test the assumption that patients who have mobility challenges or live further are more likely to be late/DNA.
  c. Post-implementation, a continuous review of the Patient Transport System data to analyse activity and the reason for eligibility and to see if there is a correlation between uptake and reduction in the DNA rate.

Management Reporting

The BRP data will be shared at the monthly Shadow Partnership Board meetings in the form of a consolidated summary report containing quantitative and qualitative analysis with feedback to the EOC Management Board and the originating hospitals.

A more detailed report will be considered by the EOC Management Board, which will also respond to recommendations from the 'Shadow' Partnership Board, with escalation as required through LNWH Trust governance arrangements.

In-scope and out-of-scope activity

As detailed in the BRP, KPI themes have been expanded to separate in-scope and out-of-scope for the EOC. The clinical outcomes and patient access for in scope activity will be directly monitored and reviewed by the EOC. This will be shared with the NWL APC. Out of scope activity defined as non-LNWH day case, ASA3+, spinal, paediatric and out of area activity will be monitored by their respective organisations and the NWL APC than the EOC Management Board.

Monitoring of the benefits in this way will ensure the risk of a two-tier system for in-scope and out-of-scope services is minimised as diverge or inequality can be spotted early on and remedial action to ensure consistent quality can be initiated by the APC. Both sets of data will be reviewed by the EOC Partnership Board to ensure there is line of sight on both in-scope and out-of-scope activity.

This is reflected in the NWL ICB Joint Forward Plan (publication pending) where the wider benefits of the EOC, including equity, quality and capacity creation across the MSK system, are anticipated to become part of the APC's governance and oversight.

This also aligns with the objectives set out in Our Way Forward: a New LNWH Strategy, to:

- Provide high-quality, timely and equitable care in a sustainable way
- Be a high-quality employer where all our people feel they belong and are
- empowered to provide excellent services and grow their careers
- Base our care on high-quality, responsive, and seamless non-clinical and
- administrative services
- Build high-quality, trusted ways of working with our local people and partners so that together we can improve the health of our communities

Community MSK services

Two patient pathway areas of focus have been identified as part of the consultation feedback and assurance review. These relate to access to MSK services pre- and post-operatively and the impact on social services of introducing the EOC . While these are two key issues; they do not form part of the BRP as they are indirectly associated with the establishment of the EOC. Access to MSK outside the EOC will be addressed through the patient satisfaction surveys and staff feedback within MSK and the EOC. The

impact on social services will be addressed through monitoring of the interaction with social services by the NWL ICB, the APC Board in Common and the EOC Management Board.

Post-evaluation review
The vision for this proposal, which constitutes one of the core objectives of the development, is to improve orthopaedic care and access across the whole patient pathway. A post-evaluation review (PER) will assess how well benefits have been realised and if there are any further actions required to enable greater delivery of benefits. Any lessons learned will be shared with future projects of a similar nature.

An initial PER will be carried out six months following the completion of the works. This will review the effectiveness of the model, patient experience and outcomes, building on the specific measures already outlined. It will have an explicit focus on patients from groups with protected characteristics to understand their experience of orthopaedic care in the model. This will inform providers and the clinical network of progress against overarching aims to report into the ICS leadership team and point to adjustments that providers may need to make to further improve care.

A comprehensive PER will be undertaken two years after completion. To gain maximum value from the PER, this will include representatives from each of the major project stakeholder groups.

7.11 Implementation challenges and risk management

Management of any significant barriers and risks to implementation will be undertaken via the Shadow Partnership Board and EOC Management Board, with monthly reports to the APC Board in Common. Should there be anything that cannot be managed by these entities, then they will be escalated by exception to the ICB Accountable Officer who will have delegated authority to decide if they are so material that implementation cannot proceed, or the mitigating steps which need to be put in place to allow progression.

Risk management
A comprehensive project risk register has been developed for all risks identified, using qualitative measures to calculate the overall level of risk according to their impact and probability. The full risk register records:

- Category of risk
- Description of the risk
- Likelihood of risk occurring
- Consequence of the risk
- Risk rating
- Mitigating actions
- Post-mitigation risk scoring
- Risk owner
- Review date
- Direction of travel
- Risk status

The risk register is reviewed and updated on a regular basis through the programme governance with key risks escalated to the NWL APC Board and NWL ICB if and when required. The highest scoring mitigated risks are summarised below. A full risk register is included in appendix 10.

Table 48 - Risk register

Risk description	Mitigating actions	Mitigated risk score
Clinical care		
There is a risk that the planned number of cases per list is not achieved	Implement best practice pathways supported by effective resources, training and development, and advanced operational intelligence. Clinical and operational agreement across partnerships	8

Risk description	Mitigating actions	Mitigated risk score
	and standing operational policies. Engagement of clinical staff in solutions.	
Financial		
There is a risk that energy and other supply chain pressures will affect project timelines and costs	Monitor and ensure early procurement of items where appropriate. Review of supply chains as per Secretary of State for Health instruction. Increase optimism bias from 15% to 23% in financial model.	12
There is a risk of insufficient capital funding to support the required theatre expansion and other infrastructure changes	Capital funding secured based on the outline business case (OBC) requirement. If the programme exceeds time thresholds, there is potential to allocate capital via LNWH agreed in principle. Control of implementation costs via proposed governance structure.	9
Significant increase in workforce to be based on the CMH site which, if not filled with substantial recruitment, then temporary staffing will be attracted at a higher cost	Agency premium has been factored in based on LNWH's current recruitment profile. Engagement and co-design of workforce plan with stakeholders. Sensitivity analysis in the OBC will reflect the risk to savings based on greater reliance on temporary staffing.	9
Operational		
Risk that delay to the project results in continuation of relatively low scores on clinical outcome metrics	Start to make changes prior to the new EOC opening, for example, Joint Weeks. Robust EOC programme governance and monitoring via Programme Board and APC governance. Clinical leadership, use of best practice guidance and data through the design, development, and implementation phases across the programme governance.	12
There is a risk that elective recovery across surgical specialities continues to impact on capacity available for orthopaedics at CMH	LNWH executive-led recovery delivery group meets fortnightly to monitor recovery across surgical specialties to plan and avoid any CMH orthopaedic impact.	12
There is a risk that delay to the project results in increased patient waiting times	Robust programme governance with ongoing surgical recovery plans and monitoring.	12
There is a risk that the implementation is delayed by shortage of key staff groups and that staff experience is poor	Executive-led workforce workstream to develop staffing strategies, including recruitment drives, rotational posts and ensure continuous professional development. Comprehensive engagement and involvement plan which includes all key stakeholder groups including staff communication, engagement, and consultation.	12
There is a risk that lack of clinical engagement with the EOC will result in under-utilisation of the EOC and unexpected pressure on the non-host trusts and NWL	Undertaking from each trust to contribute to expected activity levels. EOC programme governance, mobilisation and centre management including multidisciplinary team leadership Risks and benefits and supporting financial incentives to be incorporated in mobilisation plans. Professional/medical director leads and EOC Managing Director support.	12

Risk description	Mitigating actions	Mitigated risk score
	Clinical governance framework to measure and assure service quality and outcomes.	
Lack of a single digital patient pathway platform results in resource-heavy, inefficient management of patient pathways between organisations	Managed by digital workstream with regular updates to the Shadow Partnership Board. Implementation of sector-wide digital platforms.	9
Strategic		
There is a risk of public opposition to the proposed development of an EOC	Comprehensive engagement and involvement strategy to ensure user views inform the plan. Lay partner membership of the programme board and workstreams. Detailed and robust insights on the impact of all patient groups through a robust EHIA. Public consultation will inform mitigation with co-design with stakeholders and JHOSC.	9

Mitigated Risk Score	
15+	High
8 to 12	Medium
4 to 6	Low
< 4	Minimal

7.12 Contract management

Contracts will be managed in alignment with the approach to Change Management set out in section 7.2.

7.13 Organisational development

An organisational development programme will be commissioned to ensure that the EOC is able to function as a specialist centre within the host and to achieve the expected performance levels. We plan to take a holistic view of the host and the inter-relationships and impact between the different parts of the pathway.

We have identified the following initial focus areas:

1. Engagement inside and outside the EOC/host
2. Design of induction/orientation programmes to support onboarding
3. Operating model and procedures
4. Training programmes
5. Team working, values and culture
6. Management and leadership structure and associated appointments
7. How the EOC operates as a host of the partnership as well as being embedded within the host
8. Joint working between the host and NWL Acute trusts (sending/receiving organisations).

The detailed OD plan is being developed by the Workforce workstream of the NWLEOC Programme Board which involves representatives of all the respective Trust.

7.14 Environmental sustainability of services

The EOC has a responsibility and commitment to meet NHS England's net zero targets for emissions and mitigate the impact of the NHS on climate change. In response to feedback, we have outlined how the centre will give due consideration to environmental sustainability.

The implementation has been developed with consideration of the NWL ICB Green Plan (March 2022), a three-year plan which will start to reduce emissions from our sites, working practices and supply chain and support organisations within the ICB to deliver on their own green plans. The plan aims to bring positive change for our patients, communities and staff and address inequalities through improving environmental health and embedding social values.

The development will similarly reflect the overall aims of the LNWH Green Plan, published in August 2022. The ambition is to become a leader in the field of sustainable healthcare by proactively engaging with our staff on sustainability matters so that they are integral to, and feel part of, delivering our Green Plan.

The refurbishment of operating theatres at LNWH will be carried out under a partnership with ByCentral (PFI Project Co) which has developed trust-wide initiatives to meet the NHS objectives of Carbon Zero and Carbon Zero Plus. These initiatives include:

- planned lifecycle replacement programme that moves to modern (lower carbon) technology wherever possible (for example, over the operational phase of the PFI almost all light fittings are LED)
- targeted energy improvement works (for example, boiler burner upgrades, direct drive motors)
- energy investment initiatives (for example, installation of solar PV supported by battery technology) linked to external funding opportunities)
- wider carbon zero investments and opportunities hosted by external local initiatives (for example, Old Oak and Park Royal Development Corporation led local heat network that seeks to supply heat energy to the CMH site from a local data centre. The trust has endorsed this with a letter of "in principle" support for business case development.

Operationally, the EOC will help achieve carbon and resource savings through:

- the transition towards virtual preoperative assessment, reducing the need for patient travel.
- streamlining of high volume, low complexity surgical instrument kits.
- streamlined care pathways for patients to ensure the first contact is the right contact.
- reduced orthopaedic staff travel between sites with direct recruitment model.
- ASA 1 and 2 allows for high proportion of regional anaesthesia that can reduce anaesthetic gases use.

7.15 Digital transformation planning

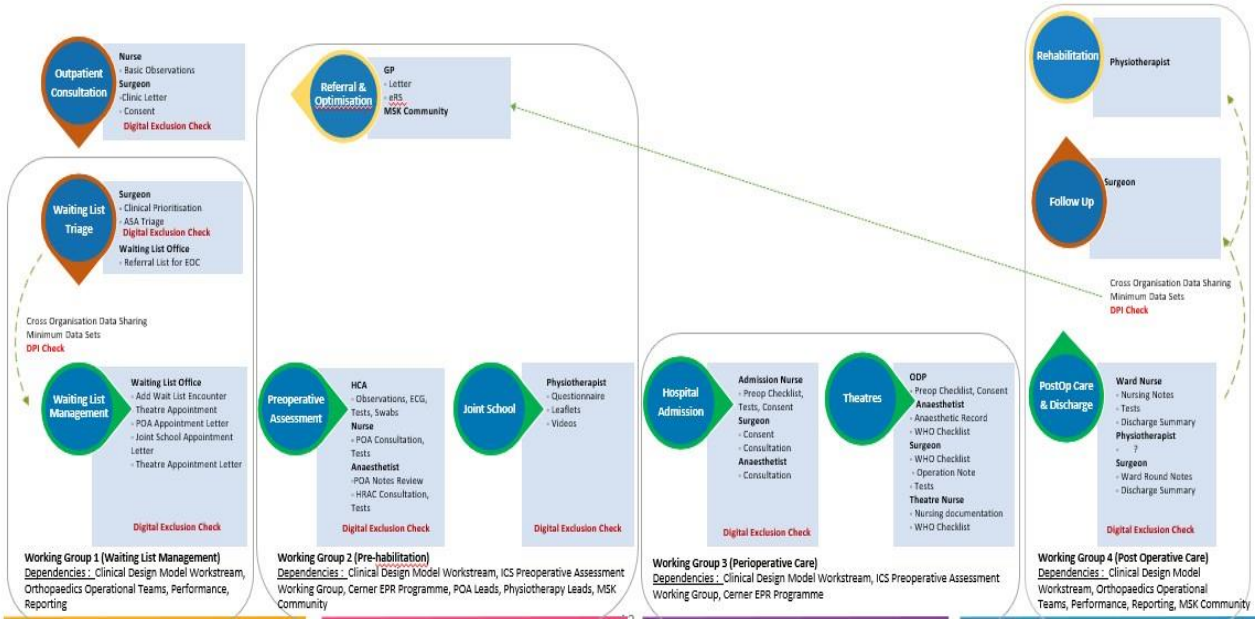
Sharing patient information across the whole care pathway will be of benefit to patients and staff across the whole ICB, delivering less duplication of work and freeing up capacity. The digital enablement and transformation workstream is working to address four main priorities:

- IT infrastructure requirements, funding and implementation.
- Inter-trust patient flows and operational processes ensuring safe transfer of patients to and from the EOC.
- Digital enablement of clinical processes for example pre-operative assessment.
- Digital inclusion building on ICB plans - ensuring all EOC process design includes digital and non-digital options.

The workstream is incorporating the challenges and opportunities arising from the forthcoming adoption of Cerner at LNWH and THHT.

The digital workstream's programme of work is categorised into four working groups (see Figure 20): waiting list management, pre-habilitation, perioperative care and post operative care.

Figure 20 - NWL EOC Digital workstream's programme of work



7.16 Translation and interpretation services

As lead provider, CMH will provide the EOC with language services in line with LNWH's inclusive communication and interpretation procedures and protocols. This service can be configured for: face-to-face interpreting, telephone call translation, video call translation, deaf and/or blind communication related services and print translations – and also provides a service for those using and designing communication services with digital and non-digital patients.

This service is currently operational at CMH and will be engaged during the design, transition and implementation stages before the go live of the centre. Feedback is monitored by CMH's patient and carer participation feedback group. They would provide a report to the EOC's weekly governance meeting once the centre is operational.

7.17 Contingency arrangements and planning

Contingency arrangements for non-delivery of the build is covered by the contract with PFI Project Co.

8 Recommendation

This Full Business Case sets out a vision for a new Elective Orthopaedic Centre based on a compelling case for change. If this is delivered, it will achieve a significant improvement in the quality and access to planned orthopaedic care for the people of NWL.

The North West London Acute Provider Collaborative Board in Common is asked to:

- **APPROVE** this Full Business Case and approve the capital funding requirement of £9.412m for an elective orthopaedic centre at Central Middlesex Hospital.

- **NOTE** that the Full Business Case has revenue implications, with a net income and expenditure benefit in the first full year of operation of £3.968m to the NWL system.

- **NOTE** that the Full Business Case has responded to all assurance feedback and requests for additional information received at various stages of governance (as detailed in appendix 14).

- **NOTE** that the Full Business Case includes:

Financial Case

a) The Trust is anticipating the capital funding requirement of £9.412m will be funded by the NHS Targeted Investment Fund (TIF). If there is a delay in receipt of TIF funding, the Trust will proceed at risk from its own capital programme whilst seeking capital funding from NWL ICS. It will need to monitor the position on an ongoing basis.
b) The financial modelling shows a net income and expenditure benefit in the first full year of operation of £3.968m to the NWL system.
c) The refreshed economic appraisal maintains option 5 as the preferred option, showing an NPV of £35.510m.
d) We have also considered the financially quantified social benefits of the service change, increasing the net present value over a 25-year term of the business case increases from £35.510m to £52.771m.
e) Outputs from the public consultation and assurance process have been assessed from a financial standpoint, and the only material change from a financial perspective is the patient transport solution. The proposed transport solution has been costed at £0.106m per year, increasing annual costs.
f) The principles underpinning the proposed financial and commercial arrangements between the NWL Acute Trusts have been jointly developed and were agreed at the Acute Collaborative Finance and Performance Committee on 10th March 2023. As part of the governance process, an addendum to the FBC has been produced setting out the activity and financial implications for each organisation to support decision making on an open and transparent basis.

Commercial Case

g) The proposal for a the NWL EOC will make use of high-quality estates at CMH, whilst also achieving compliance with national guidance for NHS hospital developments and aspiring to achieve strong BREEAM performance, contributing to Net Zero Carbon and utilising Modern Methods of Construction where appropriate.
h) These objectives will form an integral part of the procurement process and construction delivery. The team will build on a strong track record of partnership working with PFI Project Co on the CMH site.
i) The proposed development is aligned with the Trust's principles for developments across its sites. Considerable emphasis will be paid to aligning with the ICS Estates Strategy which will be developed when the ICS Acute Strategy has been finalised.
j) A comprehensive design process has been undertaken and a full set of RIBA Stage 4 drawings have been produced which have been signed off by the Design Team, including clinical representation.
k) It is essential that the enabling works are commissioned early at risk to avoid any adverse impact on the construction programme and to maintain progress against the critical path.
l) There is a clear recognition of the challenges within the construction market, with rapidly increasing costs of building materials and timing of the procurement will need to be carefully addressed to mitigate the risks of locking in these high prices.

m) The proposed location at CMH will benefit from the absence of any significant planning issues or need for planning approval, given this is refurbishment scheme with no change to the curtilage of the building.

9 Glossary of terms

Term/ Abbreviation	Definition
APC	Acute Provider Collaborative
ASA	American Society of Anaesthesiologists
AHP	Allied health professional
BOA	British Orthopaedic Association
BAU	Business as usual
CMH	Central Middlesex Hospital
CXH	Charing Cross Hospital
CW	Chelsea and Westminster Hospital
CWFT	Chelsea and Westminster Hospital NHS Foundation Trust
CRG	Clinical Reference Group
Core20	The most deprived 20% of the national population, as identified by the national Index of Multiple Deprivation,
CSFs	Critical Success Factors
DPIA	Data protection impact assessment
DC	Day case
DMBC	Decision-making business case
DTA	Decision to admit
DNA	Did not attend
DALY	Disability Adjusted Life Years
EPR	Electronic patient records
EOC	Elective orthopaedic centre
EH	Ealing Hospital
EHIA	Equality and Health Impact Assessment
FFT	Friends and family test
FBC	Full Business Case
GIRFT	Getting it Right First Time
GLA	Greater London Authority
HBN	Health building note
HEE	Health Education England
HVLC	High Volume Low Complexity
HH	Hillingdon Hospital
I&E	Income and Expenditure
IMD	Index of Multiple Deprivation
ICB	Integrated Care Board
ICS	Integrated Care System
ICHT	Imperial College Healthcare NHS Trust
IIA	Integrated Impact Assessment
IP	Inpatient

IOs	Investment objectives
JHOSC	Joint Health Overview and Scrutiny Committee
LOS	Length of stay
LCS	Locally Commissioned Services
LNWH	London North West University Healthcare NHS Trust
LSOA	Lower Layer Super Output Area
MFF	Market forces factor
MVH	Mount Vernon Hospital
MSK	Musculoskeletal
NCC	National Cost Collection
NEPTS	Non-emergency patient transport services
NPV	Net present value
NHSE	NHS England and NHS Improvement
NPH	Northwick Park Hospital
NWL	North West London
OBC	Outline Business Case
OSC	Oversight and scrutiny committee
OKS	Oxford Knee Score
PLICS	Patient Level Information and Costing System
PAS	Patient administration system
PID	Patient identifiable data
PTL	Patient Tracking List
PROMs	Patient Reported Outcome Measures
PLICs	Patient-level costings
PACU	Post-anaesthesia care unit
PER	Post-evaluation review
PIR	Post-implementation review
PCBC	Pre-Consultation Business Case
POA	Preoperative assessment
QIA	Quality impact assessment
QI	Quality improvement
RIBA	Royal Institute of British Architects
SMH	St Mary's Hospital
SMI	Severe mental illness
SOC	Strategic Outline Case
SSI	Surgical site infection
SWL	South West London
SWLEOC	South West London Elective Orthopaedic Centre
TIF	Transformation investment fund
TfL	Transport for London
THHT	The Hillingdon Hospitals NHS Foundation Trust
T&O	Trauma and orthopaedics

ULEZ	Ultra-Low Emission Zone
WM	West Middlesex Hospital
WAU	Weighted activity unit
WTE	Whole-time equivalent
WRES	Workforce Race Equality Standard