Agenda Item 4

NHS Highland

Meeting:	**NHS Highland Board**
Meeting date:	**30 May 2023**
Title:	**NHS Highland Maternity & Neonatal Business Case**
Responsible Executive/Non-Executive:	**Katherine Sutton, Chief Officer – Acute; Alan Wilson, Director of Estates, Facilities and Capital Planning**
Report Author:	**Grace Barron, Programme Manager**

1 Purpose

This is presented to the Board for:

- Assurance
- Decision

This report relates to a:

- Government directive

This aligns to the following NHSScotland quality ambition(s):

- All quality ambitions

This report relates to the following Corporate Objective(s)

Start Well	x	Thrive Well		Stay Well		Anchor Well	
Grow Well		Listen Well		Nurture Well		Plan Well	
Care Well		Live Well		Respond Well		Treat Well	
Journey Well		Age Well		End Well		Value Well	
Perform well		Progress well		All Well Themes			

2 Report summary

Our priority is to establish clinically safe, sustainable and resilient maternity and neonatal pathways for women and families accessing our services. Establishing safe, sustainable, and resilient maternity and neonatal services for Highland women and their families and contributing to a networked model of care with NHS Grampian will require revenue and capital investment. In order to achieve this, there is a requirement for:

- Establishing increased service provision to improve quality of care, patient experience and enable a more robust and sustainable service:
- Refurbishing existing physical space so that women feel better supported within the maternity and neonatal unit at Raigmore Hospital
- Creating additional options for women to receive midwifery-led care by establishing an Alongside Midwifery Unit (AMU) at Raigmore Hospital's and increasing midwifery led care provision.

This Standard Business Case sets out the process which has undertaken to develop the strategic priorities, the preferred clinical service solution, and scope the facilities required to enable the service solution.

The investment proposed within this standard business case will enable person-centred care in line with Best Start recommendations and clinical guidelines and will aide in meeting the individualised care needs of the Highland women and their families and Moray women who choose to deliver in Inverness. This will lead to better experiences for patients and the staff delivering care which supports the ongoing strategically led lived experience and colleague experience improvement work.

Delivery of the refurbishment, AMU construction, workforce recruitment and strategic improvements will enhance future service sustainability for maternity and neonatal services in Highland while offering significant additional opportunities relating to quality and performance improvement within acute and community settings of maternity and neonatal care delivery.

The areas of investment as proposed in this Standard Business Case will help provide an equitable and high-quality maternity service that is concordant to Best Start recommendations and supports the Highland population and workforce to deliver the improvements required to contribute to an integrated model of care with NHS Grampian.

The proposed capital and revenue investments offer the potential for significant continuous quality improvement opportunities which if successful will lead to revenue and non-pay savings due to less reliance on supplementary staffing to cover gaps, taking a value-based approach in meeting the needs of the Highland population and contributing to a networked model of care with NHS Grampian, and maximising resources currently in place to deliver the best possible care to women and their families.

2.1 Situation

NHS Highland is fully committed to meet its statutory responsibilities with the emphasis of improving outcomes for all babies, children, and young people, by ensuring that local planning and delivery of services is integrated, focused on securing quality and value through preventative approaches and dedicated to safeguarding, supporting, and promoting child wellbeing. The relevant national policies which inform the investment proposal in this Standard Business Case include:

- The Best Start: five-year plan for maternity and neonatal care.
- Children and Young People (Scotland) Act 2014.
- Getting It Right for Every Child (GIRFEC) Policy and Practice.
- Child Poverty (Scotland) Act 2017.
- The Promise and The Plan 2021 – 2024.
- National Guidance for Child Protection in Scotland 2021
- Healthcare Improvement Scotland Review of Ayrshire Maternity Unit, University Hospital Crosshouse, NHS Ayrshire & Arran (Adverse Events) June 2017
- UNCRC (United Nations Convention on the Rights of the Child)

These national policies are the basis for the development of local policies. The policies, strategies, and reports listed below have informed the development of this NHSH Highland Maternity and Neonatal Services Business Case.

- NHS Highland Annual Delivery Plan, ‘Together We Care,’ Start Well and Thrive Well.

- Highland Integrated Children's Services Plan 2020 – 2023, planning is underway for the next iteration of the Plan, which will include prevention during pregnancy and birth as a priority.
- Highland Children's Services Inspection of Children at Risk of Harm Improvement Plan 2023, developed in response to the recent Care Inspectorate joint inspection of children's services in the North Highland Community Planning Partnership (CPP) area.
- NHS Grampian: Networked Model of Care
- Ockenden Report - Independent Review of Maternity Services at The Shrewsbury and Telford Hospital NHS Trust

Assurance reports and presentations were provided to the Board in March 2022, September 2022 and February 2023 outlining the key steps required to progress implementation. This initial work has now been completed and the recommendations of the report have been incorporated more broadly within the Standard Business Case to develop a more sustainable and resilient model for Maternity & Neonatal services for NHS Highland.

2.2 Background

The Scottish Government Report of the independent review into maternity services for the women and families of Moray, commissioned by Cabinet Secretary for Health and Sport, Jeanne Freeman in March 2021 was published in October 2021. The report recommended a way forward that relied on NHS Highland being able to deliver capacity in terms of available midwifery, consultant, and appropriately sized physical space to meet the needs of Moray mothers that choose to deliver in Raigmore Hospital as part of the model 6 service specifications.

Before NHS Highland can safely offer maternity and neonatal services to Moray women and their families through a networked model of care (Model 6) there is a requirement to address specific features of the current Highland service model that is currently being offered to seek to meet the current and ongoing needs of the Highland population.

The preferred Service Solution includes 3 key inter-linked elements:

1. Sustainable Maternity and Neonatal Services
2. Facilities Modernisation
3. Midwifery Led Care

In considering the service solutions, the project team have undertaken an Equality Impact Assessment, which compliments the Joint Strategic Needs Assessment which has been developed. Both documents consider patient needs across a broad spectrum and ensures the future service provision offers equitable access across the community.

It is important to recognise that the strategic planning entailed in the development of this Standard Business Case was jointly reported through assurance structures aligned with key clinical and operational stakeholders from NHS Highland and NHS Grampian. As the networked models of maternity and neonatal care progress from implementation to delivery NHS Highland and NHS Grampian leadership will continue to work in partnership to understand how best these services can be redesigned. In addition in NHS Highland we have action required to ensure that the service currently delivered across Highland and Argyll and Bute are fit for the future and lay a solid foundation for any further increase in activity.

2.3 Assessment

Sustainable Maternity and Neonatal Services
Funding is required to increase the Highland workforce establishment and therefore enable recruitment opportunities for additional staff as part of enabling the Highland women and their families to access to safe, sustainable services locally.

The project group have had detailed engagement with the maternity and neonatal services to assess the implications on staffing levels to achieve the standards and objectives set out in the policies and strategies outlined above.

It is clear that significant changes in workforce profile and staffing levels will be required. The project group have used NHS Highland validated NMAHP workforce tools and Royal College of Obstetricians and Gynaecology workforce recommendations for safe staffing to assess the additional workforce requirements to ensure a sustainable and robust NHS Highland Maternity and Neonatal Services and contribute to the Networked Model of Care with NHS Grampian.

The key workforce proposed within this Standard Business Case will be realised as follows:

- Create capacity for establishing safe maternity and neonatal pathways to meet the needs of Highland women and their families
- Create capacity to enable the networked model of maternity and neonatal care with NHS Grampian
- Support integrated service delivery between acute and community settings of intrapartum, birth and postpartum care
- Enhance existing workforce through further establishing a more sustainable and robust maternity and neonatal service
- Continuously identify quality improvement opportunities through designated maternity and neonatal analytic support
- Avoid locum costs within obstetrics and gynaecology and paediatrics through recruitment of substantive staff
- Adhere to direction and recommendations from Scottish Government in the delivery of services to maternity and neonatal patients

Facilities Modernisation
Refurbishment of the Existing Maternity & Neonatal Units within Raigmore Hospital. A reconfiguration of the maternity and neonatal unit will enable compliance with the requirements of Best Start and to support colleague experience through allowing space for training needs, transitional care, and foetal medicine. The increased physical capacity will allow for an additional 500 births to be accommodated through the Raigmore maternity unit and an additional 15 Neonatal Unit admissions per annum.
The overall area to be refurbished, focussing on the Labour Suite and Neonatal Unit, is 3000 m² plus a new construction addition of 300m² of first floor accommodation, increasing the complement to 15 compliant cot spaces within the Neonatal Unit (including isolation facilities) and 7 fully compliant birthing rooms (including isolation facilities).

This refurbishment involves a realignment of current accommodation across the three principal areas within the current Maternity Block and includes the following changes to the block on the first and ground floors:

Ground Floor

- A new self-contained examination/consulting clinic to be created within central core area to facilitate antenatal high-risk specialist clinics (e.g., SGAs, Diabetes, fetal medicine, maternal medicine, etc.).
- Refurbishment of Ward 9.

- Designated space to house transitional care.

First Floor

- Provide additional floor space to Labor Suite and Neonatal departments.
- Create fully compliant delivery rooms.
- Provide one delivery room with isolation room facilities (anteroom and separate ventilation)
- Provide additional, compliant neonatal cot spaces, each with high dependency medical gases.
- Provide two compliant neonatal isolation rooms.
- Widen corridor to provide improved circulation within neonatal.
- Provide addition 'parent craft' overnight accommodation for families.
- Increased staff changing facilities.
- Improve bereavement environment and provide SIMBA room within Ward 10.
- Refurbishment of Ward 10.

Maternity Block

- Complete the fire sprinkler installation to the remainder of the building, to offer 100% safety coverage.
- Subdivide fire compartments to enhance the fire safety and fire evacuation strategy.
- Replace fabric finishes – flooring, ceilings, lighting, cabinetry

Midwifery Led Care

Evidence suggests that midwife led care improves outcomes and reduces interventions. Highland women currently do not have full range of access to midwifery led units for intra-partum care.

Survey results obtained from patient experience work, established that this is a key service feature that is currently missing however would be used and accessed by women in Inverness and surrounding areas as evidenced by views expressed in the survey. Furthermore, if midwifery led care is enhanced this will mitigate pressure within the acute setting of maternity care once a networked model of care with NHS Grampian can be implemented.

The establishment of an AMU within Raigmore's Maternity and Neonatal Unit will be realised as follows:

- Addition of 2 delivery areas within an AMU.
- Increased service provision to better meet the needs of the Highland population in a timely and equitable way that meets Best Start strategic objectives.
- Improved access to choose for Highland women through providing additional capacity by way of AMU services offered in Inverness. Women in Highland will have more choices in how they wish to give birth.
- Releasing pressure within the acute maternity setting through establishing an AMU as an option for women to deliver should they choose this and if deemed clinically appropriate.

Contributing to a networked model of care delivery that is based on the preferences of Highland and Moray women

Lived Experience

Understanding lived experience was core to our approach in the development of this Standard Business Case. Through joint work with our Comms and Engagement team a questionnaire was developed building on the engagement and feedback on maternity & neonatal services through our strategy consultation. 163 responses were received and these are in the process of being reviewed to inform of future strategic improvements.

Joint Strategic Needs Assessment

A NHS Highland Joint Strategic Needs Assessment was conducted through Public Health in partnership with key clinical and senior leadership from women's and children's services. The workforce profile proposed in the Standard Business Case considers the findings of the Joint Strategic Needs Assessment through creating service developments that focus on prevention and early intervention. This will help reduce health inequalities and health disparities experienced as a result.

Best Start

There has been substantial progress on developing an implementation plan from the SG Best Start strategy. A Best Start Workstream has been established to lead and monitor the work around the 26 board level recommendations and priorities within Best Start. The work will be conducted over the remaining 2 years of a 5-year implementation plan and will form part of the strategic direction for maternity & neonatal services in NHS Highland.

Revenue Impact

There are considerable staff costs associated with all parts of this development and for this Standard Business Case, the costs have been calculated as based on 2022/23 pay scales including all employer's costs and also allowances for leave at 22.5%.

Staff costs will be continually reviewed as this proposal is implemented to align with the requirements of the guidance and strategies outlined in the Strategic Case section of the Standard Business Case. Non-pay, and consumables have been included in the financial modelling, from the costs of the services with projections based on pro-rata activity levels.

Capital Impact

Indicative capital costs for the investment in the facilities are £4.95m including VAT, professional fees, equipment, and displaced staff services.

2.4 Proposed level of Assurance

Substantial		Moderate	X
Limited		None	

Using the NHS Highland Board Assurance Matrix as reference, the proposed level of assurance is Moderate. The NHS Highland Maternity & Neonatal Programme Board has the function to escalate any key risks to meeting key delivery milestones in contributing to a networked model of maternity and neonatal care to the Joint NHSH-NHSG Maternity and Neonatal Programme Board, which meets monthly with key cross-functional clinical and operational membership from both boards (Section 5 of Standard Business Case). The risks entailed with the implementation of a networked model of maternity and neonatal care with NSH Grampian (Appendix B) have a set of controls to mitigate and manage the impact of risk. If risk is managed through these set of controls effectively resulting in less likelihood of residual impact/intervention, the proposed level of assurance could be increased to Substantial.

3 Impact Analysis

3.1 Quality/ Patient Care

The key quality / patient care drivers are as follows:

- Evidence base from the Lancet Series used by Best Start that highlights the benefits of midwife led care.
- Lessons learned and actions planned from launching a lived experience survey to gather the views of Highland women and their families in accessing maternity and neonatal care
- Current workforce and physical space arrangements are poorly configured and do not facilitate services being integrated and fully quality driven. They are currently viewed as a significant barrier in some cases to delivering the best care outcomes for Highland women and their families
- To establish a workforce that is able to cope with current and future patient caseload
- Ability to support a culture that is quality and outcome-focused, and having adequate levels of staffing resources to drive and sustain this culture
- To deliver national and local strategies and policies
- Existing Neo-Natal Unit (NNU) facility is non-compliant with space regulations
- The direction from Scottish Government to implement choice for Moray women from end of 2026 (as part of embedding model 6 regionally), and the requirement in advance of enabling Highland service elements to facilitate the delivery of this ambition.
- To further provide equitable access for all patients with the ability to maximise choice of care and place of birth options
- To enable improved monitoring and oversight of performance within maternity and neonatal
- To utilise existing space within Raigmore Hospital in a meaningful, intentional way that benefits staff and patients
- Existing scanning suite is not fit for purpose to cope with the volume of patients

3.2 Workforce

- Addresses current service provision issues by creating the case for the required investment entailed to create a more robust maternity and neonatal service.
- Ensures NHS Highland is the employer of choice through focusing on improving workforce culture and developing a recruitment and retention strategy in the context of maternity and neonatal NHS Scotland standards.
- Supports collaborative, shared decision making between NHS Highland and NHS Grampian clinical leadership.

3.3 Financial

- Financial investment (revenue and capital) from Scottish Government will be required to safely establish maternity and neonatal care pathways between Dr Gray's Hospital and Raigmore Hospital as part of model 6 implementation.
- Investment in capital and revenue will be regularly monitored through available relevant financial data.
- Progress against recruitment targets as proposed in the business case and decant/refurbishment plans will be monitored through the Programme board-approved governance and accountability structures of the Maternity & Neonatal Programme Board.

3.4 Risk Assessment/Management

The Maternity and Neonatal Programme Board, overseeing the development of the business case, considered risks associated with implementation. These can be summarised as:

- Delays in business case approval process resulting in lost time to enable recruitment and refurbishment work to take place.
- If additional workforce required is unable to be funded, this would result in increased pressure and further capacity constraints within the neonatal unit, ward 9, ward 10, labour suite and high dependency area which will present a risk to service delivery and quality of care.
- Recruitment of medical and midwifery staff in NHS Highland across a range of disciplines may not happen as quickly as the service requires due to competing organisational priorities or external factors.

It is noted that most if not all of these risks can be mitigated with the support of the detailed risk register attached within the appendix attached with the Standard Business Case.

Delivery of the identified objectives and monitoring/mitigation/elimination of all risks will be a critical element of contributing to a networked model of maternity and neonatal care with NHS Grampian. Performance against the benefits, and escalation of identified risks and presentation of newly identified risks (where applicable) will be monitored at the Maternity and Neonatal Programme Board meetings and Joint Maternity and Neonatal Programme Board meetings which take place fortnightly and monthly (respectively) and comprise clinical, non-clinical and executive membership.

3.5 Data Protection

The investment required to enable recruitment and refurbishment, and the development of this business case, does not involve personally identifiable data.

3.6 Equality and Diversity, including health inequalities

An EQIA has been completed as part of developing the business case as enclosed within the appendix items.

3.7 Other impacts

- There is a chance that other services within Raigmore will be impacted by the Decant process entailed in refurbishing the Maternity & Neonatal unit within Raigmore. The estates project team and Women's and Children's senior management are working collaboratively to ensure the impact expected will be minimal and cause as least disruption to service delivery as possible.

3.8 Communication, involvement, engagement and consultation

- Fortnightly NHSH Maternity and Neonatal Programme Board meeting
- Monthly NHS Highland and NHS Grampian Joint Maternity and Neonatal Programme Board meeting
- Monthly Executive Collaborative Oversight Group

- Highland Maternity Voices Partnership
- NHS Highland clinical engagement sessions and 1:1s with clinical and non-clinical stakeholders to inform development of business
- case
- NHS Highland Maternity & Neonatal workshop
    - 11 May 2022
    - 13 January 2023
- Joint Clinical Engagement Sessions
- NHS Highland Board Development meetings
    - 30 August 2022
    - 28 February 2023
- Lived Experience Maternity & Neonatal Survey – Highland-based
- Together We Care Survey – Highland-based

3.9 Route to the Meeting

This has been previously considered by the following groups as part of its development. The groups have either supported the content, or their feedback has informed the development of the content presented in this report.

- Board Development (23-08-22, 28-02-23)
- Executive Collaborative Oversight Group - Monthly
- NHSH and NHSG Maternity & Neonatal Joint Programme Board - Monthly
- Maternity & Neonatal Programme Board – Fortnightly
- Asset Management Group
- Finance, Resources and Performance Committee

4 Recommendation

a) To give approval to progress with submission to Scottish Government to allow the release of funding to enable recruitment and capital works.

4.1 List of appendices

The following appendices are included with this report:

- Appendix 1: Standard Business Case - Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian
- Appendix 2: Standard Business Case Appendix Folder

NHS Highland Maternity & Neonatal Services

Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian

Standard Business Case

Version 19.0

Table of Contents

1. Executive Summary

1.1 Introduction

The Scottish Government Report of the independent review into maternity services for the women and families of Moray, commissioned by Cabinet Secretary for Health and Sport, Jeanne Freeman in March 2021 was published in October 2021. The report recommended a way forward that relied on NHS Highland being able to deliver capacity in terms of available midwifery, consultant, and appropriately sized physical space to meet the needs of Moray mothers that choose to deliver in Raigmore Hospital.

Over the preceding fifteen months work has been ongoing to develop a clear understanding of what would be required to support the NHS Highland Maternity and Neonatal Service to respond to this expectation set by Scottish Government. This work has involved significant and extensive engagement with Midwifery, Nursing and Consultant Medical staff of the NHS Highland Maternity and Neonatal Service and partnership working with NHS Grampian colleagues through a joint NHS Highland / NHS Grampian Maternity and Neonatal Services Programme Board and clinical collaboration.

The work has reviewed NHS Highland's ability to meet the requirements of The Scottish Government Best Start Policy that sets out the service specification and expectations of high quality modern Maternity Services.

This Standard Business Case sets out the need, implications, risks, benefits, and indicative costs of enabling access to safe and sustainable maternity and neonatal pathways of care for Highland women and their families and improving the physical space in which these services are delivered. Addressing both components in full will meet the service need of the Highland population and once implemented, will help support a robust and sustainable environment to support the development of a networked maternity and neonatal model between NHS Highland and NHS Grampian once clinical care pathways can be agreed jointly by key clinical stakeholders.

This Standard Business Case sets out the case for change and how the proposed new arrangements to meet the Highland-based need will enable more collaborative and integrated ways of working through drawing on lived experience to address the needs of the population and improve care outcomes for women and families in Highland. It will also improve quality of care and make better use of the available financial resources by utilising planning and performance intelligence and qualitatively analysed lived experience intelligence to inform service planning decisions and building a resilient Highland model to deliver maternity and neonatal services and meet the needs of the Highland population. The arrangements as proposed in this business case will help support the delivery of an integrated maternity and neonatal services model with NHS Grampian.

This standard business case presents opportunities to improve access to care for women and their families in Highland, create additional opportunities for patients to choose how they would like to receive their care and enables a refurbished environment to facilitate care delivery through adherence to space regulations, improved training space for clinicians and compliments Best Start strategic objectives.

1.2 Strategic Case

The Strategic Case clearly demonstrates that there is a strong strategic case for investment in Maternity and Neonatal services. The proposals are in line with national and local policies and he strategic direction of NHS Highland and its partners in the delivery of maternity and neonatal services.

The key strategic policies and guidance which have informed the investment proposed in this Standard Business Case are:

- The Best Start: five-year plan for maternity and neonatal care.
- NHS Grampian: Networked Model of Care

- Ockenden Report - Independent Review of Maternity Services at The Shrewsbury and Telford Hospital NHS Trust
- NHS Highland Annual Delivery Plan, 'Together We Care,' Start Well and Thrive Well.

The Strategic Case sets out the process of policy review, and stakeholder engagement which has taken place to inform and develop the preferred service solution.

This review has highlighted several areas within the NHS Highland Maternity and Neonatal Service that require investment and improvement to ensure high quality maternity and neonatal services fit for the future can be reliably delivered to meet the needs of the NHS Highland and Moray maternity requirements.

Enabling access to a safe and sustainable networked NHS Highland - NHS Grampian maternity model requires additional Highland service provision to be created and a fit for purpose physical environment built in order to provide a safe, equitable and high-quality maternity and neonatal service to women residing in Moray and Highland. Before NHS Highland can realistically and safely offer maternity and neonatal services to Moray women and their families through a networked model of care (Model 6) there is a requirement to address specific features of the current Highland service model that is currently being offered to seek to meet the current and ongoing needs of the Highland population.

The preferred Service Solution includes 3 key inter-linked elements:

1. Sustainable Maternity and Neonatal Services
2. Facilities Modernisation
3. Midwifery Led Care

In considering the service solutions, the project team have undertaken an Equality Impact Assessment, which compliments the Joint Strategic Needs Assessment which has been developed. Both documents consider patient needs across a broad spectrum and ensures the future /service provision offers equitable access across the community.

1.3 Economic Case

The Economic Case sets out how the Project Group has selected the most economical (value for money) option to implement the preferred Service Solution, i.e., Service Delivery.

Stakeholders from across the Maternity and Neonatal Service were engaged to consider the available options (long list) and consider the advantages and disadvantages of each option to inform the selection of the preferred option.

The Economic Case sets out the options considered for service delivery, and demonstrates how maternity and neonatal care can be enhanced to meet the needs of Highland women and their families and support a networked model of care delivery with NHS Grampian through:

1. Establishing increased service provision to improve quality of care, patient experience and enable a more robust and sustainable service:
2. Refurbishing existing physical space so that women feel better supported within the maternity and neonatal unit at Raigmore Hospital
3. Creating additional options for women to receive midwifery-led care by establishing an Alongside Midwifery Unit (AMU) at Raigmore Hospital's and increasing midwifery led care provision.

The benefits of this proposal are:

- Deliver on Scottish Government direction to establish safe maternity pathways in Highland for Moray women.

- Comply with Best Start through the refurbishment and upgrading of the Raigmore maternity and neonatal unit.
- To create additional capacity to meet the need of Highland and Moray women and their families,
- To make best use of all locally available resources.
- To present additional opportunities relating to the continuous improvement of maternity and neonatal services for the service user and service providers.
- To ensure women in Highland have as much choice as possible over the course of their pregnancy and birth.
- To enhance the maternity and neonatal pathways for Highland women and their families through using a value-based approach.

Significant service change and improvement is in progress across midwifery, paediatrics, obstetrics, and gynaecology services to work towards the new service model.

1.3.1 **Treatment Time Guarantees (TTG) – Obstetrics and Gynaecology**

It is important to note that the medical workforce delivers a joint Obstetrics and Gynaecology service which has interlinks and interdependencies and cannot be separated i.e., gynae includes the early pregnancy and social gynae service. At the current time there are challenges and constraints in relation to gynaecology service delivery and performance against national targets with a clear requirement to improve. There are currently significant waiting times (TTG) recovery work to be progressed in the Gynaecology service.

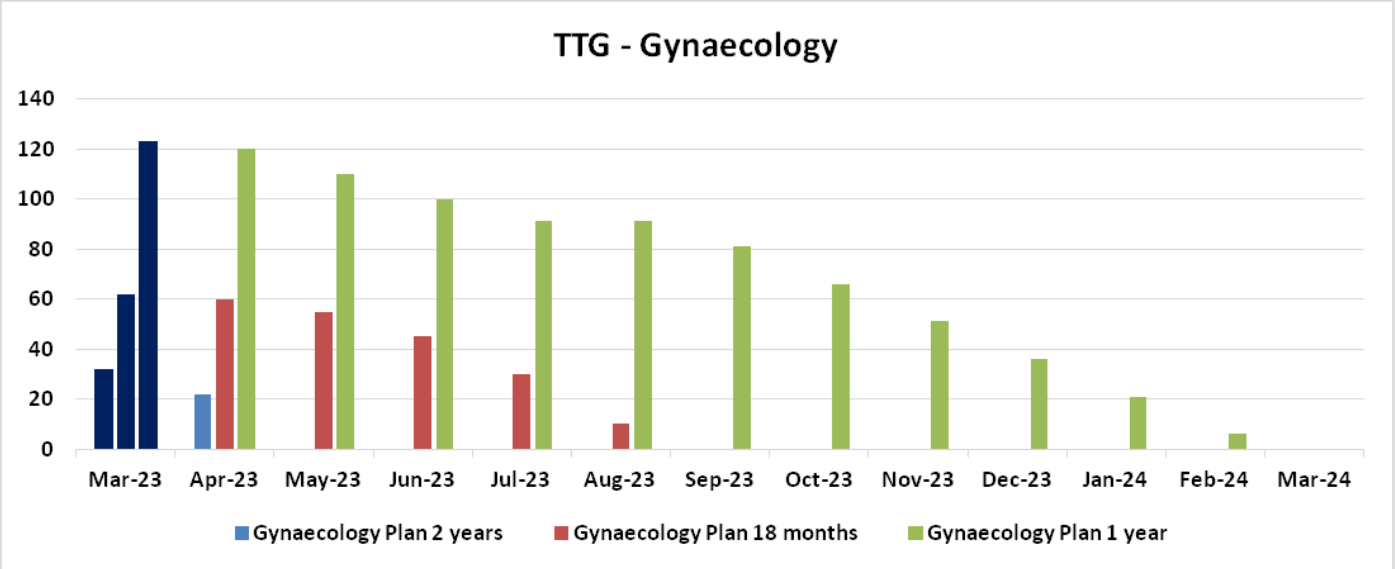
The investment will enable significant improvement in waiting times through the provision of enhanced and larger facilities, and the revised medical staffing model.

Over the past three years across the Women's and Childrens Directorate thirteen medical staff have left the unit and a further ten colleagues have been recruited into post. Plans to recruit to the revised medical workforce model will mitigate further retirements or colleagues leaving NHS Highland.

As the service transforms over time workforce numbers and design will be revised and renewed to meet the evolving service model. Recruitment of substantive staff will deliver higher quality of service and more efficient use of funding than utilising short term locum staffing. The service is committing to support the Moray maternity networked service requirement to offer choice for Moray women of birth at Raigmore Hospital whilst the workforce and infrastructure within Dr Grays Hospital in Elgin is recruited, to allow the re-instatement of consultant led maternity services. At the current time Dr Grays Hospital need to recruit a significant workforce to be in a position to re-instate safe consultant led obstetric service. Whilst recruitment is ongoing the Raigmore Hospital maternity service will need to ensure the workforce is available to meet increasing numbers of Moray women who choose to give birth at Raigmore Hospital.

The preferred service solution will provide the service capacity to address the current performance shortfall against Treatment Time Guarantees. A forecast of the increased capacity which will be available through this investment has been developed, and the charts below demonstrate a return on investment through addressing current backlog across Obstetrics and Gynaecology (inpatients and outpatients) within 12 months.

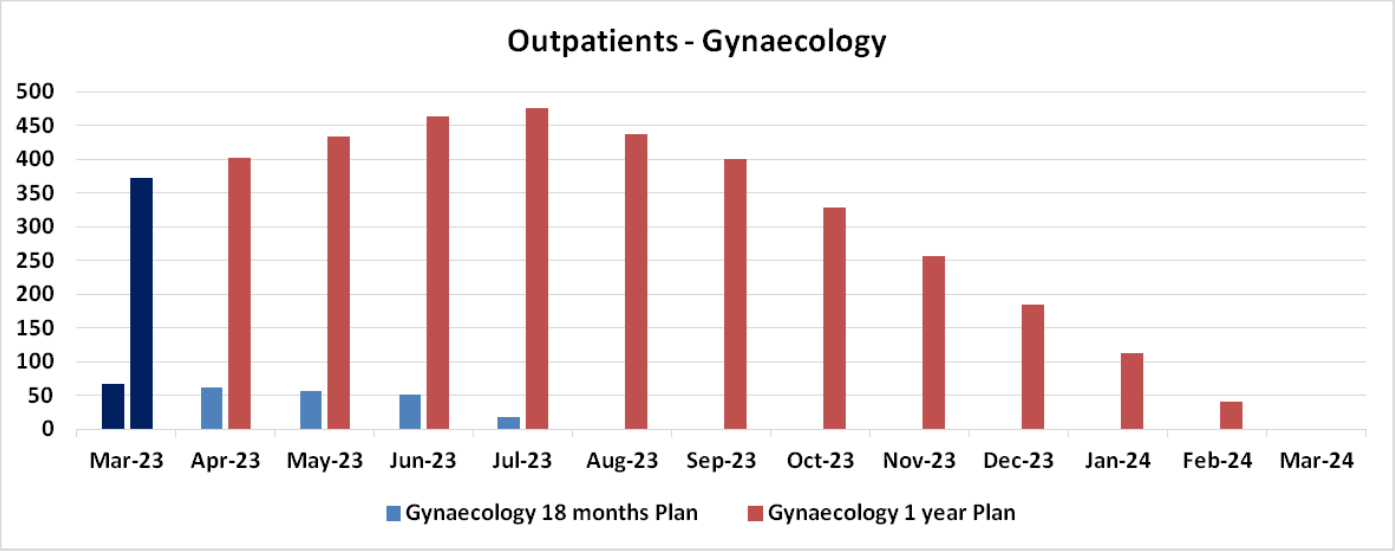
The proposed job plans compared with the specialty dashboard and trajectories was submitted to the Scottish Government during 2022.



If we were to continue delivering care to patients seeking gynaecology treatment with our current levels of medical staffing, data suggests there will continue to be a waiting list for patients waiting to be seen:

Spedality	Numbers waiting over	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
Gynaecology	2 years	32	22	0	0	0	0	0	0	0	0	0	0	0
Gynaecology	18 months	62	60	55	45	30	10	0	0	0	0	0	0	0
Gynaecology	1 year	123	120	110	100	91	91	81	66	51	36	21	6	0

If all Obstetrics and Gynaecology posts were successfully recruited to, the wait list for treatment would be cleared for 1-year waits by November 2023. The 18-month waits would be cleared by August 2023, and the 2-year waits would be cleared by April/May 2024.



If all Obstetrics and Gynaecology posts were successfully recruited to, the wait list would be cleared for 1-year waits by December 2023 and the 18-month waits would be cleared by July 2023 – this can be phased according to when funding is released, but it's informed by phasing in the new recruits.

Patients on waiting lists are treated by medics of all levels: trainee, specialty doctors and consultant.

1.3.2 **Paediatric Staffing**

The preferred service delivery model with enhanced paediatric staffing levels will deliver direct operational and clinical benefits to the service. The implementation of the preferred staffing model will address the following issues:

- Safety of all children within Raigmore Hospital and the peripheral areas as 2 consultants would be available to meet the current demand plus increased workload arising from babies admitted to the unit from NHS Grampian.

- Compliance with BAPM guidelines, as there would be a dedicated consultant available for the Neonatal Unit during the week for the full working day.

- Compliance with RCPCH guidelines, as with this reconfiguration, it will be expected that the children's ward consultant reviews all patients admitted up to 9pm at night, to ensure that the 14-hour review rule is met.

- Consolidation of neonatal skills over a smaller cohort of paediatricians, who would also have the opportunity as part of their job plan to maintain their neonatal skills by spending 3 weeks every 2 years in a tertiary neonatal unit.

- Neonatal paediatricians would have support and training of peripheral midwife units and possibly delivering neonatal life support courses for local clinicians included in their job plan.

- Continued reliance on locums affects standards of care, planning and performance and team morale/resilience.

- Additional 4 consultants would provide significant necessary outpatient clinic capacity (10 clinics per week) and SPA activity arising from recent increase in need for Educational Supervision. Some of the costs of this will be offset by enabling some of the existing consultants to reduce their hours by handing over some subspecialty work and reducing their neonatal hot week commitments.

- No change to the admission criteria, which would otherwise result in an increase in patient transfers which is the most high-risk situation for a pregnant woman, with compromised outcomes for foetal survival.

It should be noted that the service has considered additional measures to deliver the required objectives without the need for further investment, as follows:

- We have attempted to recruit to the advance neo-natal nurse practitioner post but have been unsuccessful, nationally this is a challenge.

- We aimed to invest in a neo natal nurse practitioner rolling training programme, similar to the very successful obstetric midwife sonographer one. However, there are no staff willing to undertake this training at this time.

It is important to recognise that the Paediatric medical workforce provides out-patient activity as well as in-patient paediatric activity. With successful recruitment the increase in staffing establishment will increase paediatric out-patient capacity from 135 patients to 166 patients per month.

Paediatrics

Monthly New OP Activity

Month	Actual Activity	Planned Activity
Apr-23	124	135
May-23		135
Jun-23		135
Jul-23		135
Aug-23		135
Sep-23		135
Oct-23		166
Nov-23		166
Dec-23		166
Jan-24		166
Feb-24		166
Mar-24		166

1.4 Commercial Case

The Commercial Case sets out the procurement route proposed for delivery of the facilities modernisation element of the proposed investment.

It is proposed that Health Facilities Scotland (HFS) Frameworks 3 is used to appoint a Principal Supply Chain Partner (PSCP) with a design team to develop an effective and affordable design solution which will provide facilities which enable the Maternity and Neonatal Services to deliver the service proposal detailed in the Strategic and Economic Case.

1.5 Financial Case

The Financial Case details the financial requirements of the proposed investment, and the affordability of the proposals.

The Financial Case presents the revenue costs (recurring and non-recurring) and the capital costs associated with implementing the service solution.

The workforce and staffing requirements proposed within this standard business case, in addition to the refurbished Maternity and neonatal facilities at Raigmore Hospital are not currently possible within the existing NHS Highland funding resource and will require a commitment to an increased revenue funding allocation, and a capital allocation from Scottish Government.

1.6 Management Case

The Management Case details how the proposed investment will be delivered.

This presents the Governance arrangements, project management arrangements, approach to risk management, benefits realisation, and the anticipated programme for implementation.

NHS Highland have an established project team with experience of successfully delivering construction and refurbishment projects within a live acute healthcare environment at Raigmore Hospital. A project governance structure is in place and will ensure robust reporting, oversight, and informed decision making is in place to direct the project team as required.

2. Strategic Case

2.1 Overview

This Strategic Case explores the case for change and sets out the policies and strategies which have informed the case for investment in Maternity and Neonatal Services in NHS Highland. The Strategic Case demonstrates how the proposed investment fits in with the overall local and national strategies.

2.2 National Policy Context

NHS Highland is fully committed to meet its statutory responsibilities with the emphasis of improving outcomes for all babies, children, and young people, by ensuring that local planning and delivery of services is integrated, focused on securing quality and value through preventative approaches and dedicated to safeguarding, supporting, and promoting child wellbeing. The relevant national policies which inform the investment proposal in this Standard Business Case include:

- The Best Start: five-year plan for maternity and neonatal care.
- Children and Young People (Scotland) Act 2014.
- Getting It Right for Every Child (GIRFEC) Policy and Practice.
- Child Poverty (Scotland) Act 2017.
- The Promise and The Plan 2021 – 2024.
- National Guidance for Child Protection in Scotland 2021
- Healthcare Improvement Scotland Review of Ayrshire Maternity Unit, University Hospital Crosshouse, NHS Ayrshire & Arran (Adverse Events) June 2017
- UNCRC (United Nations Convention on the Rights of the Child)

These national policies are the basis for the development of local policies. The policies, strategies, and reports listed below have informed the development of this NHSH Highland Maternity and Neonatal Services Business Case.

- NHS Highland Annual Delivery Plan, 'Together We Care,' Start Well and Thrive Well.

- Highland Integrated Children's Services Plan 2020 – 2023, planning is underway for the next iteration of the Plan, which will include prevention during pregnancy and birth as a priority.

- Highland Children's Services Inspection of Children at Risk of Harm Improvement Plan 2023, developed in response to the recent Care Inspectorate joint inspection of children's services in the North Highland Community Planning Partnership (CPP) area.

- NHS Grampian: Networked Model of Care

- Ockenden Report - Independent Review of Maternity Services at The Shrewsbury and Telford Hospital NHS Trust

2.3 Networked Model of Care with NHS Grampian

On 30 March 2022, the Cabinet Secretary announced an intention to establish a consultant-led maternity unit (Model 6) at Dr Gray's Hospital, Elgin following the report produced by the external review team in 2021.

To progress to this model of service delivery, it was detailed that a networked Community Maternity Unit linked mainly to Raigmore Hospital (Model 4) should be developed within 2 years.

In line with the Cabinet Secretary's stated expectations, a draft plan with milestones and timescales for achieving Model 4 was shared with Scottish Government in summer 2022.

In December 2022, following review of a draft plan by NHS Grampian, relating to enhancing maternity services in the North of Scotland, the Cabinet Secretary announced that Model 4 would no longer proceed, and stated that:

"As a result of this ambitious plan, we will no longer be proceeding with Model 4 as previously outlined, however I expect NHS Highland and Grampian to continue to work together to ensure sustainable maternity services for women in the North and North-East of Scotland.

"Redevelopment of Raigmore maternity unit remains a key part of this journey, to provide vital improvements for women who give birth there. I am also pleased to see enhanced complex antenatal care; consultant led triage and day assessment and elective caesarean sections returned to Dr Gray's in two years' time – this is very positive for the women of Moray and will significantly reduce the number of journeys to Aberdeen."

NHS Grampian and NHS Highland continue to work together on the planning for, and development of Model 6, which will meet the Scottish Government commitment that women from Moray will be offered the choice of place of birth at Raigmore Hospital from early 2025.

Joint working and discussion with executive and clinical colleagues in NHS Highland have continued throughout 2022 and in addition to the existing groups of the Joint Board and the Maternity and Neonatal Collaborative. In particular, the midwifery teams have made progress in resolving the capacity issues that have hindered consistent intrapartum transfers and will continue to meet.

NHS Grampian and NHS Highland are committed to delivering a consultant led obstetric service at Dr Gray's Hospital through a networked approach. The two organisations are working collaboratively to plan and implement the necessary changes with our population, workforce, and partners. The model will ensure that women in Moray have access to safe, high quality, fully supported maternity, and neonatal services.

Although 'Model 4' and 'Model 6' are set out in the Ralph Roberts Report (2021) as different models, they are, in effect, on a continuum of service development and planning for implementing these models reflects that.

Many of the changes and conditions necessary for achieving the final model require to be phased in a way that prepares staff and services for full implementation. It should also be noted that service planning take place on a system wide basis, with impacts and benefits considered across the system. A summary of those benefits is set out below:

The additional resource required to deliver Model 6 in Dr Gray's Hospital is significant, at a time when financial pressures on budgets for existing services is considerable.

Service Benefits	
Model Four	**Model Six**
Women are able to receive care at Dr Gray's, Aberdeen, or Raigmore Hospital	Consultant-led unit with midwifery-led maternity unit operating from Dr Gray's
Antenatal care delivered at Dr Gray's	This includes wrap-around support necessary to sustain an extended maternity service.
24-hour availability of Midwife-led triage and assessment at Dr Gray's	The unit will include all antenatal, intrapartum and postnatal services.
This will support reduced travel times for a majority of births	Women will be able to receive care at Elgin, Aberdeen, or Inverness
Midwife-led intrapartum care in Dr Gray's, offering the potential to provide approximately 20% of Moray births (all of these births would be those categorised as 'low risk')	A small number of women may still require, in the interests of the wellbeing of the mother and baby, to give birth in the tertiary obstetric unit in Aberdeen.
Access to planned consultant-led intrapartum care shared between Raigmore and Aberdeen Royal Infirmary as part of a 'network'	

A detailed overview of Model 6 Milestones and Timescales is included in the Appendices for reference. It is clear that the implementation of Model 6 will have implications on the workforce and staffing requirements in NHS Highland, and it is important that planning for this eventuality is considered now.

2.4 The best start: five-year plan for maternity and neonatal care

Best Start sets the national strategic aim for improving access to safe, high quality, equitable maternity, and neonatal care across all health boards in Scotland. Best Start has the following 6 guiding principles at the core of its strategic recommendations:

- Family-centred, safe, and compassionate approach to, recognising unique circumstances and preferences
- Fathers, partners, and other family members are actively encouraged and supported to become an integral part of all aspects of maternal and new-born care
- Continuity of care and carer, across the whole maternity journey, with vulnerable families being offered any additional tailored support they may require
- Services are redesigned using the best available evidence, to ensure optimal outcomes and sustainability, and maximise the opportunity to support normal birth processes and avoid unnecessary complications
- Staff are empathetic, skilled, and well supported to deliver high quality safe services, every time
- Multi-professional team working is the norm with an open and honest team culture, with everyone's contribution being equally valued.

The National Best Start Programme Board has agreed that the following priorities for Board delivery:

- A renewed focus on the multi-disciplinary aspect of continuity of carer.

- Flexibility in approach to roll out is supported so that there is safe space to try different approaches towards implementation.
- In recognition of the challenges more time is given to implement continuity of carer (timescale for continuity extended to 2026).
- Boards are provided with opportunities to learn from each other.
- Implementation should focus on women with poorer outcomes, including those experiencing social complexity and Black, Asian and minority ethnic women.
- Recognition of the importance of ensuring Boards are moving forward at a pace which is comfortable for them.

NHS Highland was an early adopter of Best Start, however the impact of the COVID-19 pandemic stalled substantial progress from being made on implementing Best Start recommendations from March 2020 – April 2022. From April 2022, the Best Start project has been relaunched and complimented by the strategic direction and planned deliverables of NHS Highland's Together We Care Strategy. At present, there are a number of risks that may affect the pace of delivering the Highland-selected Best Start recommendations, including current shortage of midwifery and medical workforce, sustaining a community midwifery units (CMU) model given the relatively high number of vacancies within community midwifery, lack of suitable parent accommodation at Raigmore and shortage of overall clinical capacity required to take work forward.

Scottish Government initiatives Best Start: five-year plan for maternity and neonatal care (2017) and the Women's Health Plan (2021) have been outlined to improve health and reduce inequalities for women both in pregnancy and out with, it which places additional demands on the medical workforce. The nationally published guidance in the Maternity Self-Assessment Tool provides support in this regard to help rate current maternity services as well as to benchmark services against the national standards.

The original timeframe for Best Start implementation envisaged a five-year implementation timeline, ending in 2022. However, because health boards prioritised the COVID-19 response over the last 2 years, the Scottish Government has allowed for a two-year extension to the implementation period of Best Start. In acknowledgement of this extension period, the Best Start Implementation Programme Board agreed the following priorities for health board delivery:

- Planning: Develop and submit Best Start Implementation Plans to implement 28 Best Start recommendations for local delivery by 31st August 2022.
- Reporting: Submit Best Start data to the SG across a suite of 28 local recommendations by 31st October 2022 and then again semi-annually.
- Continuity of Carer: Continue roll out of continuity of carer, with particular focus on women and families experiencing social complexity and/or women with poorer maternity outcomes (including Black, Asian and minority ethnic women).
- SAER: Implement new Significant Adverse Event guidance (2021) and report progress.

In order to adhere to the recommendations outlined within Best Start, additional staffing is required to safely support and meet the needs of Highland women (and Moray-based women as part of embedding a regional networked model of care delivery) who choose to access maternity services from Raigmore and who chose to receive care that is midwifery led within an Alongside Midwifery Unit. The provision of additional staffing resource will support the 6 guiding principles of Best Start and further solidify a sustainable and safely staffed maternity and neonatal workforce, family-centred services and create opportunities to ensure maternity and neonatal care providers receive the appropriate training required to enable them to empathetically treat patients with dignity, fairness, and respect. Additionally, the design of the available space within the Raigmore maternity and neonatal units must be refreshed to support the clinical delivery in line with Best Start ambitions.

At present, Raigmore Hospital does not have designated space for transitional care. In addition, the bed and patient flow system in the current maternity and neonatal unit does not support individual patient

factors (e.g., the unit is currently not designed to suit all patient requirements). The capital proposal as outlined in this business case will mitigate the inhibitors to the delivery of the Best Start principles through refurbishing an existing unit in line with Best Start strategic direction and will increase service provision that is midwifery led through establishing an Inverness-based Alongside Midwifery Unit. The refurbishment and establishment of the Alongside Midwifery Unit will support and facilitate patient-centred, individualised care delivery and will help contribute an increased capacity to meet the need of the networked, integrated model of care with NHS Grampian.

2.5 Ockenden Maternity Review

The final report of the Independent Review of Maternity Services at The Shrewsbury and Telford Hospital NHS Trust was published in March 2022, following a detailed investigation into failures in the provision of maternity care.

The first report identified Local Actions for Learning, (LAfL) and Immediate and Essential Actions, (IEAs) to be implemented at the Trust and across the wider maternity system in England. The second report builds upon the first report in that all the LAfL and IEAs within that report remain important and must be progressed.

Within the final report, the independent maternity review team identified a number of new themes which are shared across all maternity services in England as a matter of urgency to bring about positive and essential change. The report recommended that the IEAs be considered by all Trusts across England in a timely manner. Since the publication of the first report, the UK Government has introduced a range of measures and invested very significantly in supporting maternity services across the country, much of this funding is for workforce expansion. The four key pillars for essential actions are:

1. Safe staffing
2. Well-trained workforce
3. Learning from incidents
4. Listening to families

Post Ockenden Report the Women and Children`s Directorate has completed a gap analysis of the current services as opposed to the set requirements. An initial report of the gap analysis has been presented to the NHS Highland Board Clinical Governance Committee in 2022.

The NHS Highland gap analysis and action plan has been developed to progress relevant recommendations from both the Ockenden and East Kent maternity reports.

The recommendations relate directly to planning, service delivery and review of maternity and neonatal services across north NHS Highland and A&B Health and Social Care Partnership and are consistent with NHS Highland Board strategy Together We Care and Argyll and Bute strategic plan, and specifically the Start Well ambition

Actions necessary for substantial assurance:

1. Development of a sustainable service model that reflects the ability to recruit and retain staff.
2. Development of a robust workforce plan that identifies numbers needed to recruit and pipelines for recruitment.
3. Development of a governance framework that when in place demonstrates impact in terms of reduction in incidents and complaints.
4. A training plan is in place that addresses workforce pressures and supports staff to attend.

2.6 NHS Highland Strategy: Together We Care

NHS Highland has developed a five-year strategy, **Together We Care**, to take a whole-systems approach to the future of health and care for and with our Highland population. As part of the development of the Together We Care strategy, NHS Highland held 45 engagement sessions with members of the public, the NHS Highland workforce, and community 3rd sector organisations and stakeholders to allow members of the Highland population to actively provide their views on what matters most to them.

In addition, 1,700 survey responses were received, which allowed insight as to where strategic priority should be given over the next five years. Drawing on the results from the Together We Care survey and the feedback received at the internal and external engagement sessions, improving maternity and neonatal services was deemed by the Board to be progressed as a strategic improvement opportunity. Table 1 demonstrates the strategic need for improvement in maternity and neonatal services through sampling maternity-related quotes obtained through the Together We Care engagement activities and survey.

Table 1: Together We Care Engagement: Maternity Feedback

	Details of respondent
"As a midwife maternity services are lacking way behind other areas in women's choice. Women's services are often undervalued and underinvested in. Women deserve a welcoming place to birth their babies where the family unit is supported. We have a crisis with a shortage of midwives so need to retain everyone that we train and encourage midwives to stay with good development opportunities, training and learning and making their job manageable."	NHSH employee East Ross
"Improved and safeguarding maternity services, midwives who are passionate about women giving birth at home or in their locality."	Member of public Caithness
"Maternity and early childhood care- from my experience it seems whilst staff are brilliant, they are overworked, with not enough time to spend on the 'care' part of the role."	Member of public Lochaber
"In Highland, maternity and woman's health in rural area needs significant development."	Member of public Inverness-shire
"There needs to be more midwives available to offer evidence-based support to new mums in their most vulnerable time."	NHSH employee Inverness-shire
"Key priorities should be maternity women and child health with a rainbow service incorporating all services and personnel under one umbrella"	NHSH employee Ross-Shire
"Joined up approach to maternity services in Caithness"	Partner / Community Caithness
"Children and families starting with more support for first time mothers before and after birth leading to happier childhoods and less mental health issues."	Member of public Inverness-shire
"Distance maternity patients have to travel for routine appointments not available locally, problematic with weather road conditions, safety, and time element. It is a long way from far north to Raigmore if there are any adverse weather/road conditions as well as family/economic situations. Is any thought given to those of us with no family/transport/finance assistance to travel all that way."	Member of public Caithness
"NHS Highland has the opportunity to demonstrate how there doesn't need to be health board silos and can lead the way with their maternity services opening up choice and support to the women of Moray."	Member of public Nairnshire

2.7 Health Needs Assessment

A Highland Pregnancy and Birth Needs Assessment has been completed (Appendix 1). The needs assessment aims to provide an overview of the population health needs and issues concerning pregnancy and birth in Highland.

The needs assessment forms part of a larger programme of work looking at population health needs for babies, children and young people undertaken in spring 2023, which will help to inform strategic priorities and commissioning of services at an NHS Highland and Integrated Children`s Services Partnership level.

A health needs assessment (HNA) is used to assess a population's unmet health and healthcare needs to support planning and commissioning services. The definition used by the National Institute for Health and Care Excellence (NICE) is ‘a systematic process used by NHS organisations and local authorities to assess the health problems facing a population.’

The HNA is a systematic process used by NHS organisations and local authorities to assess the health problems facing a population. This includes determining whether certain groups appear more prone to illness than others and pinpointing any inequalities in terms of service provision. It results in an agreed list of priorities to improve healthcare in a particular area.

The needs assessment has been completed as a rapid 'desk based' HNA, drawing together information gathered from local and national sources. It utilises epidemiological and comparative approaches to explore trends and inequalities in health outcomes for mothers and babies.

A rapid report of this type gives an overview of key points to help understand the population's needs and contribute to the planning and improvement of services.

The key points from the Health Needs Assessment are summarised below for reference:

- There is variation in booking for antenatal care by population groups likely to have higher needs, notably women under the age of 20, women over the age of 40 and women living in the most deprived quintile of deprivation.

- Recording and reporting complex social factors and vulnerabilities in the maternity record are essential. Data capture about vulnerable women should continue to be improved.

- Reducing stillbirths and infant mortality should continue to be a priority for action.

- Patterns of preterm births and low birth weight are associated with complex social factors, deprivation, and maternal risks. Attention should be given to preventative actions to reduce risks.

- There is strong evidence that breastfeeding is one of the most preventative health measures for children and mothers, with short-term and long-term benefits. Actions to improve breastfeeding uptake should be prioritised.

- A programme of improvements focused on BadgerNet (the electronic maternity and neonatal healthcare record system created by CleverMed, Ltd.) should be undertaken to ensure the reporting of pregnancy and new-born screening indicators.

- Women with complex health needs include women who smoke, women who are obese and women who use alcohol and drugs during pre-conception and pregnancy. These factors are linked to deprivation and social inequalities. Opportunities for preventative work should be strengthened.

- Preventative activity in pre-conception, pregnancy and early years should be strengthened, and prevention explicitly considered as a part of service and pathway design or redesign.

- A programme to enhance and improve midwife-led care would have the benefit of reducing interventions and cost avoidance associated with interventions.

Whilst there is an inherent uncertainty and unknowns in forecasting future population trends and healthcare needs, these marginal changes are understood and factored into the design of future services along with consideration of local factors such as the proposals for development of a Green Port in Cromarty Firth which could provide 25,000 new jobs which would clearly have an impact on local demographics and birth rates.

2.8 Stakeholder Engagement

In the development of this business case, and in planning improvements within Highland maternity and neonatal services, two years of feedback were reviewed in relation to maternity, neonatal, obstetrics and paediatric services.

The following key themes were identified in this review:

- Occurrences where communication from staff to patients deemed unsatisfactory.
- Physical environment not up to the standards patients were expecting.
- Delays in receiving infant feeding support.
- Partners unable to attend antenatal screening appointments due to COVID-19 infection control measures in place.
- The patients self-reporting experiencing trauma as a result of birth plan not being followed.
- Risk of maintaining continuity of carer for women based in Caithness who, due to their risk presentation, are recommended to give birth in Raigmore Hospital.

2.8.1 Maternity and Neonatal Patient Experience

An electronic survey was developed and issued by the Maternity & Neonatal Programme that ran from 1st September 2022 – 30th September 2022. Posters asking maternity patients and those with infants in the neonatal unit were sent via mail to all CMUs and community teams to ensure coverage, and posters were also posted in heavy footfall areas within the maternity and neonatal unit in Raigmore. The support of 3rd sector partners was also enlisted to help spread awareness of the survey, and social media groups (e.g., Highland Mummies) were sent the survey to post on their social media for women and their families to complete and share about their experiences with Highland maternity and neonatal services.

163 responses were received in the month that the survey was live and accessible by the public. Of these responses, 52% of participants received maternity care in the last 12 months, 29% received maternity care in the last 1 – 3 years and 18% received care over 3 years ago. An initial analysis of the results was conducted, and those who had received care over 3 years ago were excluded for the purposes of data validation entailed with formulating action-based strategically led improvement plans. While a strategic improvement plan is to be developed on these results, initial themes gathered from the survey are as follows:

- Most participants gave birth in Raigmore.
- Most participants lived in Inverness or surrounding areas; the second most participants lived in Caithness; and the third most participants lived in Lochaber.
- Most participants were between the ages of 26 and 34 years of age.

High-level summary analyses were conducted analysing the themes of the responses received through the survey. The table below highlights the top 3 themes across the 4 experience questions asked in the survey:

Question	Top 3 Themes
Tell us about some good experiences you had with any of our maternity services. This could include pre-conception, care while you were pregnant (in the community or hospital), care during labour, post-natal care, and any specialist services (i.e., screening, breastfeeding, stopping smoking, help with a loss or miscarriage, perinatal mental health, etc.).	Care in labour (acute) Supportive / caring staff Community midwives (support, accessibility, treatment)
Tell us about a time you were frustrated with maternity services at NHS Highland. What could have gone better? This could include pre-conception, care while you were pregnant (in the community or hospital), care during labour, post-natal care and any specialist services (i.e. screening, breastfeeding, stopping smoking, help with a loss or miscarriage, perinatal mental health, etc.).	Poor communication Lack of locally available services Felt staff not available to support
Was there a service during your pregnancy, birth or after your birth that helped you a lot?	Breastfeeding support Community midwives Health visits
If you could change one aspect of your experience with NHS Highland maternity and neonatal services to make it better for others, what would you change? What improvements would you like to see?	More access to staff Antenatal education opportunities More up to date and patient friendly facilities

A lived experience improvement strategy, drawing on the themes as listed above, will be developed in line with NHS Highland's Engagement Framework by the Maternity and Neonatal Programme Board (with senior clinical leadership input and engagement) in response to the results of the survey once thoroughly interrogated across all variables (e.g., ages, protected characteristics, locality, etc.).

Delivery completion timescales and accountable owners will support the implementation of the lived experience improvement strategy, which compliments NHS Highland's 5-Year Strategy, 'Together We Care.'

2.8.2 **Maternity and Neonatal Colleague Experience**

Improving colleague experience will lead to improved retention rates across maternity and neonatal services, improved patient experience and overall improved health outcomes and quality for maternity and neonatal patients and their families. NHS Highland maternity and neonatal services are currently working in partnership with organisational development to enable people and culture to transform systems, leadership, and accountability. Across Highland's Women's and Children's Directorate, a colleague experience improvement strategy will be developed to:

- Build on the objectives set out in the National Workforce Strategy
- Bring together the wellbeing, leadership and equalities needs of the workforce over the next 5 years
- Bring together the different factors that can contribute to workplace culture
- Seek to build capacity and capability to create a nurturing environment for all staff, including senior leaders and managers, that allows them to flourish both professionally and personally
- Set out immediate deliverables that will set the direction for future culture change

An initial colleague experience engagement session was held in September for midwifery staff. The following themes were identified as cultural factors and needs that require to be addressed through a colleague experience improvement strategy to create a nourishing and supportive environment:

A root cause analysis was conducted utilising the themes as gathered at the initial colleague experience engagement session and 4 years of consecutive iMatter results. Upon examining the causal factors of the current measures of colleague experience within midwifery, lack of sustainable workforce was noted as a main contributor to affecting colleague experience. Therefore, Highland is developing a colleague experience improvement strategy in parallel with a recruitment and retention action plan across maternity and neonatal services.

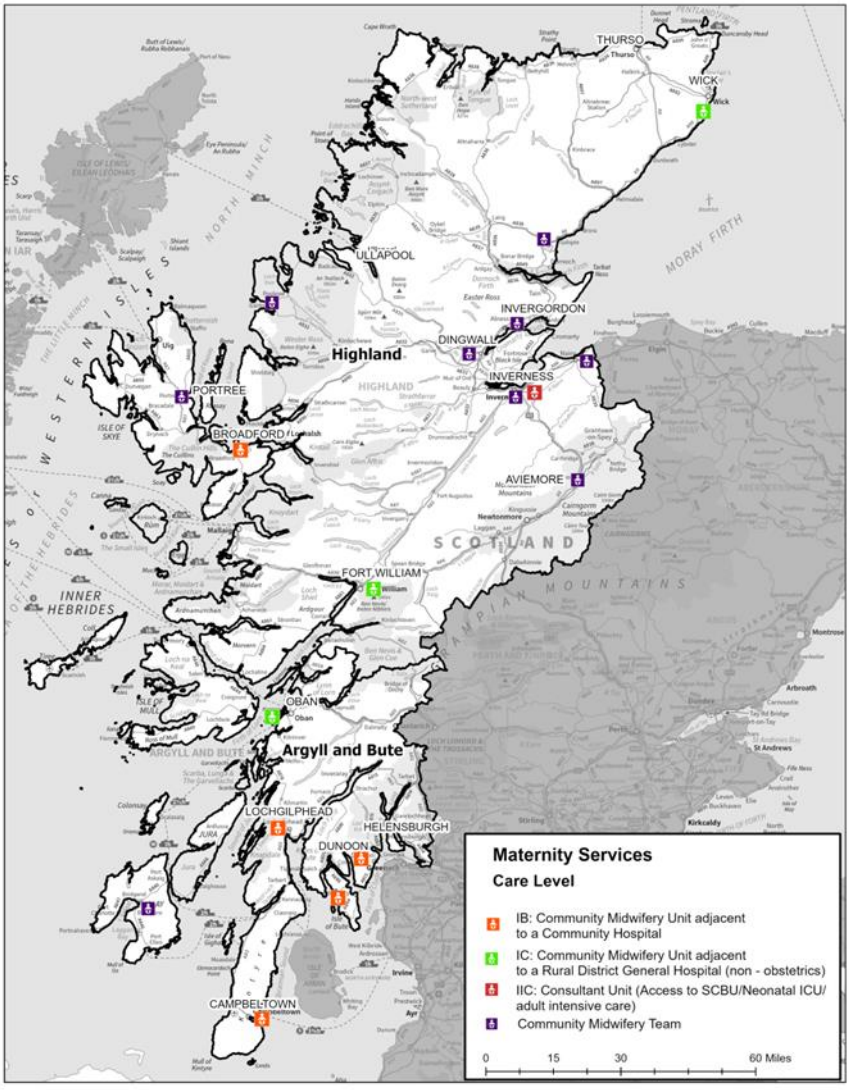
2.9 Current Arrangements

2.9.1 Project Context

Delivering healthcare in a sparsely populated environment, special considerations are made in every decision to ensure equitable access to care for all patient groups. The population of Highland is approximately 235,500, which is an increase of 12.7% from 208,850 in 1998.

NHS Highland is, geographically, the largest health board in the United Kingdom. NHS Highland's geographical area ranges from rapidly expanding urban environments, to remote and rural island/mainland communities. Nearly 60% of Highland's population live in areas that would be considered remote/rural.

Providing maternity services in rural areas presents many challenges. The planning, co-ordination and delivery of NHS Highland's maternity care services are community and acute based to ensure that women and families have access to safe, equitable services as close to home as possible.



NHS Highland
Maternity Services Locations

NHS Highland

Directorate of Public Health
Public Health Intelligence Team

Date: 12 May 2023

Raigmore Hospital is the only acute-district hospital within the NHS Highland. Raigmore Hospital consists of 8 floors which house an emergency department, teaching facilities, a designated outpatient department, an intensive care unit, theatre suite, and several units in relation to treatment specialties.

The current Maternity Unit (Zone 8) at Raigmore Hospital consists of:

- An obstetric theatre with access to a second theatre when required
- 6 birthing areas within a labour suite
- A level-2 neonatal unit (local neonatal unit, LNU) containing 14 cots for intensive care, high dependency, and special care needs
- 2 wards that accept obstetric patients
- Antenatal outpatient clinics
- Antenatal scanning facilities
- Administrative accommodation

Raigmore Hospital delivers maternity and neonatal services through consultant and midwifery led multi-disciplinary teams. In addition, there are 7 community teams and 3 community midwifery units (CMUs) designed to deliver care to women and families across the Highland areas. Raigmore Hospital serves as the referral centre for north NHS Highland maternity and neonatal services with several community teams being supported via a hub and spoke model. North NHS Highland maternity care locations are as follows:

- Raigmore Hospital
- Wester Ross Maternity Team
- Alness-Invergordon-Tain Community Team
- Dingwall-Black Isle-Beauly Team
- Nairn Community Team
- Aviemore Maternity Team
- 3 Inverness based community teams out-reaching from Clava on New Craigs site
- Caithness CMU
- Ft. William CMU
- Skye & Lochalsh CMU

2.9.2 **Maternity and Neonatal Service Details & Facility Arrangements**

The current maternity and neonatal arrangements are summarised in the table below:

Obstetric-led Unit	In an *Obstetric unit (OU)*, care is provided by a team of midwives and doctors. Raigmore Hospital is the Highland-based facility that houses an obstetric unit. Midwives provide care to all women in an obstetric unit, regardless of risk grading, and take primary responsibility for women at low risk of complications during pregnancy and during labour and birth. Obstetricians have primary professional responsibility for women at high-risk of complications and for women who develop complications during labour and birth. Obstetric units are always situated in hospitals where diagnostic and medical treatment services, including obstetric, neonatal, and anaesthetic care, are available on site. Obstetric units provide care to low and higher risk women. 'Higher risk' women - those who have health problems and/or less straightforward pregnancies - should normally be advised to give birth in an obstetric unit.
Midwifery-led Units	At a midwifery-led unit, midwives take the primary professional responsibility for labour care. This is sometimes described as midwife-led care. Midwifery units offer care to women with straight forward pregnancies, or pregnancies where the risk of complications is low.
Alongside midwifery	Situated in the same hospital or on the same site as an obstetric unit so have

units (AMUs)	access to obstetric, neonatal, or anaesthetic care on site, although women may need to be physically transferred to the obstetric unit if they need obstetric care.
Freestanding midwifery units (FMUs)	Not situated in a hospital or site with an obstetric unit or neonatal unit. Where the woman needs obstetric or anaesthetic care, or the baby requires neonatal care they need to be transferred to another hospital where these services are provided. These may be referred to as Community Midwifery (or Maternity) Units.
Remote rural community midwifery units (CMUs)	In NHS Highland there are two CMUs located within rural general hospitals and an additional CMU located within a community general hospital. In these locations, midwives provide emergency cover as well as support for local births. The midwives are supported by Emergency Department Teams, Scottish Ambulance Service and Neonatal Retrieval Teams.
Neonatal Unit	Neonatal care is the type of care a baby born prematurely (before 37 weeks' gestation), with a medical condition which needs treatment, or at a low birthweight receives in a neonatal unit. Neonatal units are part of the acute hospital care delivery setting. Paediatricians, paediatric nurses, allied health professionals and healthcare support workers deliver care within a neonatal unit.
Antenatal and Postnatal Beds	The bed and patient flow system in the current maternity and neonatal unit does not support individual patient considerations. The service would ideally be able to separate antenatal and postnatal women during their admissions. Further work is to be pursued by the NHS Highland Maternity & Neonatal Programme exploring aligning capacity through demand and understanding how skill-mix within services can be leveraged at maximum capability.
High Dependency Admission Area	Maternity services currently use a four-bed area to provide women with one-to-one care. Occasionally women may require transfer to the ITU / high dependency area, some distance away from their baby. The current room sizes and bed spacing, are currently below the recommendations in Best Start.

2.10 Patient Pathways in NHS Highland

Women using maternity services are currently identified as being on either a high-risk (consultant-led care) or low risk (midwife-led care) pathway, following triage at their booking appointment with a midwife against agreed criteria.

Discussion with all women is facilitated throughout the course of their pregnancy to enable them to make decisions regarding care and birth preferences, including place of birth. The pathway for maternity care requires women to have continuous risk assessment throughout their pregnancy, birth and the postnatal period considering that risk status is dynamic and may change over time. It is anticipated that women may move between low-risk and high-risk, in both directions, as a result of clinical recommendation or other factors. A change in risk from low- to high-risk at any stage in pregnancy may result in a woman who had planned to give birth in a community midwifery unit to instead give birth in Raigmore Hospital.

2.10.1 **Antenatal Care**

Community-based midwives are responsible for booking women. At the first booking appointment, an initial risk assessment is completed by the community midwife, and subsequently graded as high-risk or low risk depending on the criteria and risk presentation at the time of booking. Women who fit the criteria as being low risk would be offered home birth or CMU if available, they can also choose to give birth in Raigmore. Women typically have 8-10 appointments with their primary midwife during their pregnancy. It is to be noted that some women may need more or might have appointments with other members of their healthcare team depending on level of risk. Women who are deemed as high-risk are assumed to be booked to deliver in Raigmore. It is to be noted that once a low-risk woman changes to high-risk, her birth plan will be amended to have Raigmore Hospital as the intended location of delivery. Depending on level of high-risk, the clinical judgement would be made with regards to how often they are seen with an appointment. The care of low-risk women is managed via the respective community team and can be referred to Raigmore Hospital at any point in their pregnancy should they require. All women who are accessing NHS Highland maternity services have access to the Badgernet app to view their test results, view their maternity notes, their birth plan, and how to get in touch with their maternity unit/primary midwife.

2.10.2 **Intrapartum Care**

As part of implementing Best Start, the teams strive for continuity of carer with regards to delivering antenatal, intrapartum, and postnatal care to women, however there may be clinical incidences during birth where continuity of carer is not possible due to a sudden change in risk (e.g., a low-risk women changing to high-risk at the time of birth due to complications). This would result in a change of primary carer for the woman during her birth. Women who experience high-risk complications while in labour in a CMU will be re-directed to being cared for in line with the high-risk pathway, which entails an intrapartum transfer from the respective CMU to Raigmore where the woman and her family will have consultant-led care over the remaining course of her birth.

2.10.3 **Postnatal Care**

Postnatal care for women who were low risk at the time of birth is led by their respective community midwifery team. Low risk women have access to obstetric input as required. Women who were deemed high-risk at the time of birth have postnatal care that is fulfilled by the respective community midwifery team once discharged.

2.10.4 **Neonatal Care**

Raigmore houses a 14-cot level 2 unit (Local Neonatal Unit). The neonatal service covers a whole pathway of care including intensive care, high-dependency care, special care, outreach care and transport if required. Neonatal care is a low-volume, high-cost speciality commissioned by specialised services. It covers all levels of care from intensive care through to care in the community. Acuity and dependency vary depending on the individual need of the neonate, and professional judgement is required to determine how many nursing and support staff will be required on a shift-by-shift basis. Sufficient staffing is required in order to offer the highest possible standards of care, and offer safe, effective care to babies and their families as part of a cohesive multidisciplinary team where and when required.

2.11 Drivers for Change

The key drivers for change are:

- Evidence base from the Lancet Series used by Best Start that highlights the benefits of midwife led care.
- Lessons learned and actions planned from launching a lived experience survey to gather the views of Highland women and their families in accessing maternity and neonatal care
- Current workforce and physical space arrangements are poorly configured and do not facilitate services being integrated and fully quality driven. They are currently viewed as a significant barrier in some cases to delivering the best care outcomes for Highland women and their families
- Ability to support a culture that is quality and outcome-focused, and having adequate levels of staffing resources to drive and sustain this culture

- To deliver national and local strategies and policies
- Existing Neo-Natal Unit (NNU) facility is non-compliant with space regulations
- The direction from Scottish Government to implement choice for Moray women from end of 2026 (as part of embedding model 6 regionally), and the requirement in advance of enabling Highland service elements to facilitate the delivery of this ambition.
- To further provide equitable access for all patients with the ability to maximise choice of care and place of birth options
- To enable improved monitoring and oversight of performance within maternity and neonatal
- To utilise existing space within Raigmore Hospital in a meaningful, intentional way that benefits staff and patients
- Existing scanning suite is not fit for purpose to cope with the volume of patients

2.11.1 **Organisational Goals**

An investment in Maternity and Neonatal Services will enable NHS Highland to meet the expectations of the Scottish Government in implementing national strategy linked with Best Start and compliance to quality standards of care delivery and outcomes. The opportunity as proposed in this business case seeks to enable more sustainable service provision which will help contribute to the networked model of care in partnership with NHS Grampian.

NHS Highland recognises the importance of delivering safe, equitable and high-quality care for Highland women and women based in Moray who choose to deliver in Raigmore as part of implementing model 6 jointly across both Boards.

- Increasing capacity for approximately an additional 500 births within Raigmore as a result of the planned upgrade to the Maternity Unit with increased labour suite capacity and the development of an Alongside Unit on the Raigmore site.
- Increasing capacity within the Neonatal Unit by one cot to provide for approximately an additional 15 admissions per annum.
- Enabling access to care for women in Moray who choose to deliver in Raigmore as part of the regionally networked model of maternity and neonatal care delivery described within the model 6 specification.
- Providing services and facilities that are compliant with Best Start recommendations and other Scottish Government directives.
- Ensuring NHS Highland is an employer of choice through focusing on improving workforce culture and developing a recruitment and retention strategy in the context of maternity and neonatal services.
- Person-centred care remains the primary aim of service delivery.
- Services are evidenced to be sustainable and high quality through enhanced monitoring of performance metrics and utilisation of benchmarking comparator data from other boards.
- Ensuring the capacity is available to accommodate the potential increase in births from the population migration into the local area to support the Freeport development.

2.11.2 **Cancer Performance in Gynaecology**

There are challenges around cancer treatment waiting times in Gynaecology. The service currently does not meet local (14 days) or national (62 days) performance targets due to constraints in the facilities available, and staffing levels. Patients are not receiving treatment timeously.

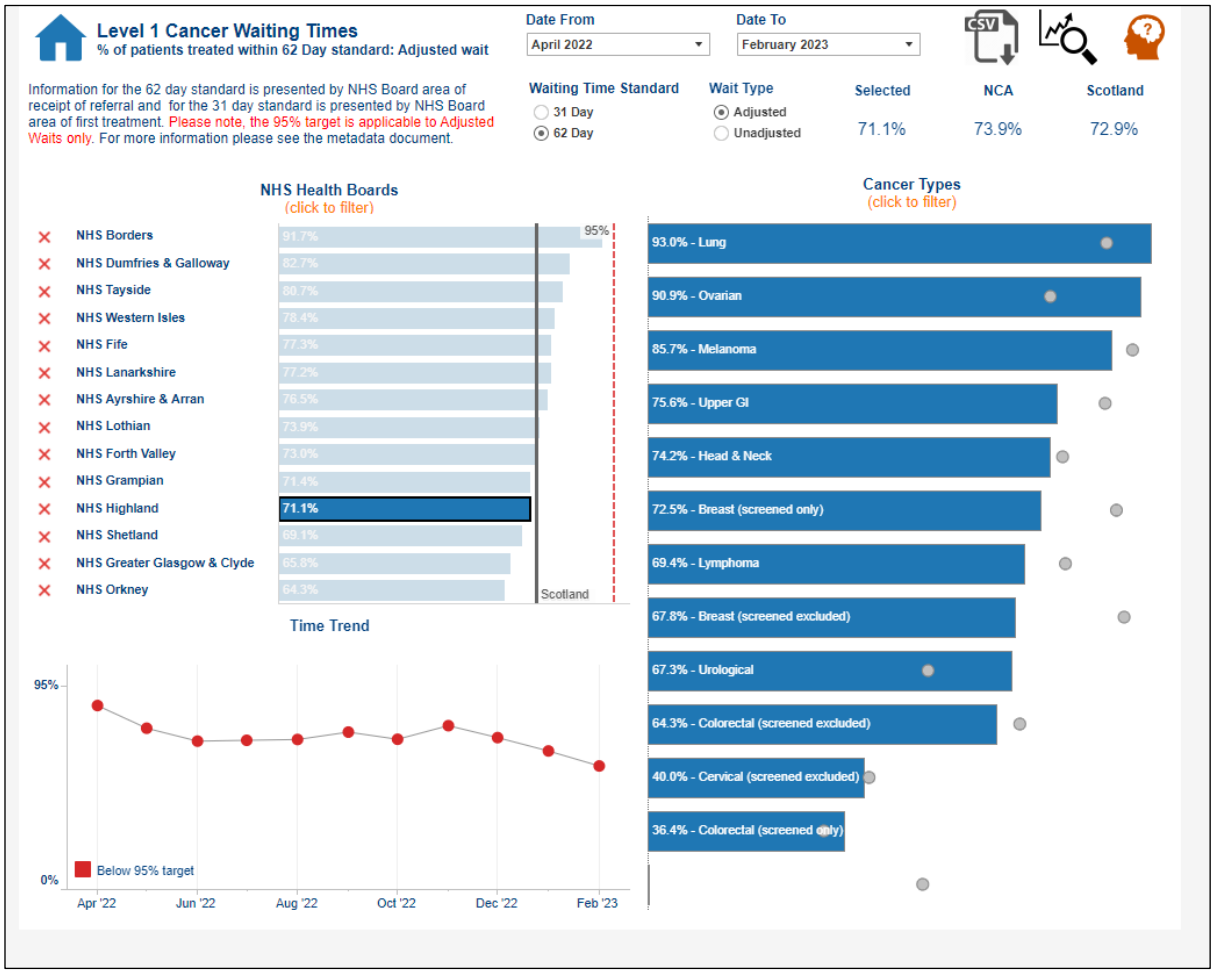
Quality Performance Indicators Audit Report published by The North Cancer Alliance covering performance on Ovarian cancer, Cervical cancer and Endometrial cancer and demonstrate that there are opportunities for improvement in cancer waiting times across Gynaecology service.

The key factors in waiting times are:

- Lack of physical space (facilities) in which patients can be assessed.
- Capacity constraints due to workforce constraints.

These constraints will be addressed through the investment proposed in this business case.

The graph below demonstrates the Cancer Waiting Times including cervical and ovarian performance of NHS Highland compared with other NHS Scotland Boards.



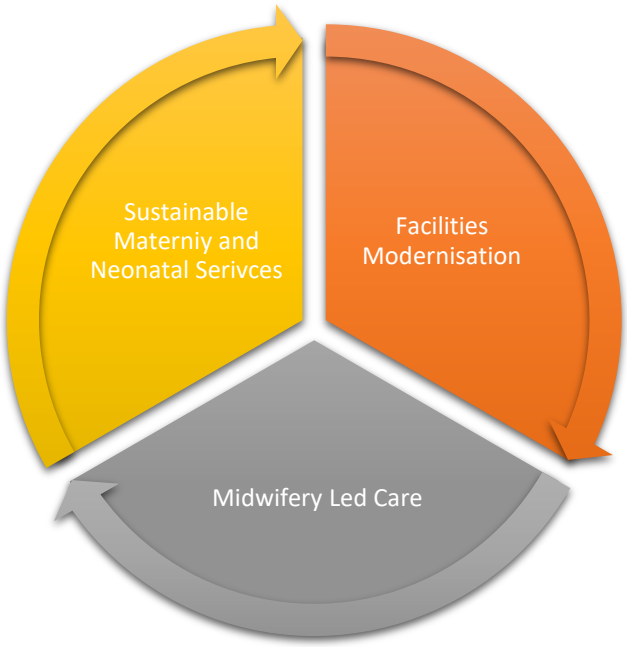
2.11.3 **Day Case Gynaecology**

NHS Highland have been making increased provision for gynaecology services in the areas of Caithness and Lochaber (Fort William), with refocus and redesign of gynaecology services towards day case operating. This requires the recruitment of additional consultants to support this enhanced strategy for delivery of gynaecology services. These service changes will be supported through establishing educational workshops on women conditions for non-gynaecology staff e.g., A&E staff to improve diagnosis and treatment.
Digital platforms including Near Me services will also support these service efficiencies through increasing patient contact, raising awareness through digital platforms and sign-posing to the correct source.

2.12 Service Solution

The project group have assessed the strategic context, organisation goals, and drivers for change and considered the service solution which can be implemented to deliver on the strategic requirements.

The service solution consists of three distinct elements, each of which are fundamental to delivering the service solution and enabling the service improvements required to meet the strategic objectives.



The three elements of the preferred service solution are outlined below.

2.12.1.1 Sustainable Maternity and Neonatal Services

The project group have had detailed engagement with the maternity and neonatal services to assess the implications on staffing levels to achieve the standards and objectives set out in the policies and strategies outlined above.

It is clear that significant changes in workforce profile and staffing levels will be required. The project group have used NHS Highland validated NMAHP workforce tools and Royal College of Obstetricians and Gynaecology workforce recommendations for safe staffing to assess the additional workforce requirements to ensure a sustainable and robust NHS Highland Maternity and Neonatal Services and contribute to the Networked Model of Care with NHS Grampian.

Funding is required to increase the Highland workforce establishment and therefore enable recruitment opportunities for additional staff as part of enabling the Highland women and their families to access to safe, sustainable services locally.

2.12.1.2 Facilities Modernisation

Refurbishment of the Existing Maternity & Neonatal Units within Raigmore Hospital. A reconfiguration of the maternity and neonatal unit will enable compliance with the requirements of Best Start and to support colleague experience through allowing space for training needs, transitional care, and foetal medicine. The increased physical capacity will allow for an additional 500 births to be accommodated through the Raigmore maternity unit and an additional 15 Neonatal Unit admissions per annum.

2.12.1.3 Midwifery Led Care

Evidence suggests that midwife led care improves outcomes and reduces interventions. Highland women currently do not have full range of access to midwifery led units for intra-partum care.

Survey results obtained from patient experience work, established that this is a key service feature that is currently missing however would be used and accessed by women in Inverness and surrounding areas as evidenced by views expressed in the survey. Furthermore, if midwifery led care is enhanced this will mitigate pressure within the acute setting of maternity care once a networked model of care with NHS Grampian can be implemented.

A workforce plan for midwifery has been in development to prepare for the new model of midwifery roles. This workforce plan has involved extensive stakeholder engagement and is near complete.

2.13 Delivering the Service Solution

The service solution proposed within this proposal will be realised as follows:

Service Solution: Sustainable Maternity and Neonatal Services Additional Workforce Requirements to Enable More Sustainable and Robust NHS Highland Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian
• Create capacity for establishing safe maternity and neonatal pathways to meet the needs of Highland women and their families • Create capacity to enable the networked model of maternity and neonatal care with NHS Grampian • Support integrated service delivery between acute and community settings of intrapartum, birth and postpartum care • Enhance existing workforce through further establishing a more sustainable and robust maternity and neonatal service • Continuously identify quality improvement opportunities through designated maternity and neonatal analytic support • Avoid locum costs within obstetrics and gynaecology and paediatrics through recruitment of substantive staff • Adhere to direction and recommendations from Scottish Government in the delivery of services to maternity and neonatal patients
Service Solution: Facilities Modernisation Refurbishment of Existing Maternity & Neonatal Units within Raigmore Hospital: Reconfiguration of the maternity and neonatal unit to comply with the requirements of Best Start and to support colleague experience through allowing space for training needs, transitional care, and foetal medicine.
• Significantly improve the use of existing NHS Highland facilities through refurbishment of Raigmore maternity and neonatal units in line with current local and national policy and guidance. • Significantly enhance the suitability of patient accommodation within Raigmore maternity and neonatal units. • Addition of 1 neonatal unit cot. • Increase of one labour suite delivery room. • Opportunity to adhere to national strategic direction through creating additional functionality and efficiency of existing space (e.g., Best Start & transitional care bed space and implications for designated space to train staff). • Opportunity to create usable, multipurpose space to be able to support operational and strategic direction.
Service Solution: Midwifery Led Care Increased Stability and Additional Capacity to Enhance Midwifery Led Care in Highland to Support Women and Their Families with Choice.

- Addition of 2 delivery areas within an AMU.
- Increased service provision to better meet the needs of the Highland population in a timely and equitable way that meets Best Start strategic objectives.
- Improved access to choose for Highland women through providing additional capacity by way of AMU services offered in Inverness. Women in Highland will have more choices in how they wish to give birth.
- Releasing pressure within the acute maternity setting through establishing an AMU as an option for women to deliver should they choose this and if deemed clinically appropriate.
- Contributing to a networked model of care delivery that is based on the preferences of Highland and Moray women.

Currently staffing levels support the use of 4 labour rooms and in tandem with the 5th room as a birthing pool option. By adding 2 additional rooms, this gives the facility capacity for an isolation/ante room and increase in birthing room capacity. Based on average number of births, if 1,866 women delivered with 5 rooms the assumption would be that 372 women could be delivered per additional room. Being mindful that extreme variability surrounding labour and delivery needs to be considered and one of the extra rooms would be multi-functional and have less availability because of this. This calculation was based on the safe staffing plan as detailed in this proposal.

An AMU would potentially take 20% of capacity, which is our assumption given that 20% of Highland woman are eligible to receive midwifery led care. This would total 374 women able to deliver in an AMU working on scenario modelling per annum.

Through the refurbishment works detailed in this proposal, we are creating additional labouring capacity within the maternity and neonatal unit of two rooms. Based on capacity calculations capacity would be created to deliver the potential of an addition of approximately 500 births. This figure is approximate and will be influenced by a woman's individual pathway. The creation of the alongside birthing capacity will also create additional postnatal bed capacity. Recognising the variation in demand flexing of bed compliment within the Raigmore maternity and neonatal unit will be applied to manage peaks in demand.

2.14 Why is the Proposal a Good Thing?

This proposal addresses the key service changes that are required in order to create safe, sustainable maternity and neonatal services to meet the need of the Highland population and, by doing so, the requirements to contribute to the networked model of care with NHS Grampian.

This proposal will deliver an enhanced clinically led and effective maternity and neonatal service model within Raigmore Hospital and its surrounding estate through the establishment of an AMU, additional labour suite capacity and Neonatal Unit capacity and will adhere to local and national strategy through providing women with more choice in their birth plan as well as increased proportion receiving continuity of carer.

As well as aligning to national strategy, the proposal will make better and more efficient use of the footprint of the existing maternity and neonatal space within Raigmore Hospital. Each of these benefits will enable robust, sustainable, and high-quality local maternity and neonatal services and contribute to the networked model of care with NHS Grampian as part of model 6 implementation.

The facilities from which the maternity and neonatal service is delivered within Raigmore Hospital no longer meets the requirements of a modern-day maternity and neonatal facility. The proposals for refurbishment outlined within this business case will increase the physical space and number of cots available to deliver neonatal services and will increase the physical space and number of maternity beds, as well as ring fencing bed capacity for midwifery led care in line with expectations of the Best Start policy principles. This will refurbish the facility to an improved standard to deliver maternity and neonatal services and ensure a sustainable, person-centred, and effective clinical service.

With appropriate refurbishment of the existing hospital space and the increased provision of midwifery led care in Inverness and improved acute maternity and neonatal service provision within NHS Highland, the Board will be better positioned to enable a networked model of care delivery in partnership with NHS Grampian.

The improved service provision and physical space will also further improve existing pathways and newly identified pathways around the needs of local women and Moray-based women who choose to give birth at Raigmore Hospital, thereby facilitating a person-centred care service delivery model while also supporting the needs of women and families directly through modifying the available space in accordance with patient and staff feedback.

2.14.1 **Public Health Role of the Midwife**

The range of posts identified with in the business case will enable the services across Highland to enhance the public health outcomes for women and families. This workforce will also bring NHS Highland into line with Boards across Scotland.

Pregnancy motivates women to achieve optimal health, it is a time when they are receptive to information to improve their health. Midwives are key public health providers, who protect and enhance the health and social being of women to make healthy lifestyle choices, this in turn promotes the health and well-being of society by reducing health inequalities, stillbirth, preterm birth, and low birthweight babies. Public health messages area an integral part of midwifery practice.

There are a wide range of interventions where midwives take a lead role in during the antenatal period. Smoking cessation plays a vital role in improving the outcomes for unborn babies. It is well documented that smoking is detrimental to both mum and baby, increases the chance of foetal abnormalities, stillbirth and small for gestational age babies (RCOG 2018, NICE 2021). We have worked closely with local public health teams to develop a dedicated specialist maternity support worker post to support midwives to offer women continued support to stop smoking.

During antenatal consultations with the midwife women are taken through a detailed history taking which encompasses their physical, mental, and emotional well-being. A holistic approach is taken to these enquiries and a woman's social circumstances and relationship with her partner are explored. Women are routinely and specifically asked whether Domestic Violence is a concern in their lives, this question is asked in the absence of their partner being present. In Highland in 2022 around 20% of women disclosed domestic violence to their midwife.

The maternity teams work will also engage in brief interventions with women from a public health perspective e.g., around drug and alcohol misuse. A specialist drugs and alcohol midwife has recently been appointed with the Public Health team to support this agenda.

The RCOG (2018) express the importance of maintaining a healthy weight and lifestyle in pregnancy to reduce the morbidities and mortalities. Women who are obese are more likely to require an induction of labour, emergency CS or a vaginal birth that requires a medical intervention. The named midwife is key to providing women with advice on healthy diet and exercise in pregnancy, however if further support is required, we have established a specialist midwife-led healthy pregnancy clinic, which aims to provide bespoke care to women to help achieve a healthy weight and lifestyle during pregnancy. This has been developed with the support of local public health dieticians.

The 2022 MBRRACE-UK report highlights the need for interventions to support women's mental health, there has been a significant increase in the numbers of women who die by suicide within the first 6 weeks following birth (3-fold since 2017-19). Pregnancy can exacerbate pre-existing mental health issues or create new issues for women. Midwives may be the first point of contact for women to seek help and advice around this issue.

Breastfeeding is a hugely significant public health intervention, where women choose to Breastfeed, it protects their babies and children form a wide range of illnesses. It also provides mothers with protection from serious illnesses e.g., breast and ovarian cancer. The midwifery teams provide information and support throughout the antenatal period and postnatally to support women to make informed choices and establish successful breastfeeding.

There is a focus nationally on the ability for maternity services and aligned services to be in a position to provide postpartum contraception aims to support women to make planned choices around future pregnancies and improve maternal and child outcomes through optimum spacing between pregnancies (FSRH 2020).

Maternity services have an ideal opportunity to provide contraception at a time when women are attending a service staffed by healthcare providers with the skills to offer a full range of methods and when women may be highly motivated to start using an effective method. Health professionals working within the maternity services should discuss and support women in their choice of contraception during the antenatal and postnatal period. Recent research (Thwaites et al 2021) shows that almost 50% of women would rather receive their postnatal contraception before they leave inpatient maternity services. The benefits of long-acting reversible contraception (LARC) methods in terms of efficacy should be highlighted to all pregnant women (FSRH 2017).

Contraceptive advice is regarded as an essential component of maternity care. There is a high rate of unplanned pregnancies amongst women from 'hard to reach' groups, such as teenagers and women with more complex care needs, within 12 months of birth. There is stark data provided through Public Health England which shows that for every £1 spent in postnatal contraception within maternity services there is a return on investment £32 for the public sector.

Midwifery practice directly impacts the health of mum and baby, supporting midwives to deliver key public health messages is a pivotal role of the public health midwife. Targeting key public health areas will empower women not only to make healthy choices in pregnancy but will also reduce health inequalities and support women and their families to achieve an optimum health in pregnancy, which in turn will reduce future morbidity and mortality rates in the child.

2.14.2 **What benefits will be gained from this proposal?**

Benefits were identified in a series of focussed workshops, 1:1s and group discussions with a cross-functional team of key stakeholders (via the Maternity & Neonatal Programme Board), involving clinical and operational management staff located within Raigmore's maternity and neonatal unit and in community-based maternity services pan-Highland.

Key themes of the benefits were identified as follows, and structured discussions were based around these:

- Patient experience.
- Improved performance.
- Positive outcomes.
- Impact on assets.
- Adherence with national policy.
- Adherence with national and local strategy; and
- Improved quality of care delivery.

Benefits proposed by the cross-functional team were also validated against NHS Scotland's strategic investment priorities: Person-centredness, safety, effective quality of care, improved health of the population, value, and sustainability.

The Programme Board were asked to assess the importance of the benefits on a 1-5 scale. 28 benefits were identified, with priority ratings ranging from 3-5, a full list of which can be found in Appendix 6.

Benefits priority rating scale:

Rating	Relative priority
1	Fairly insignificant
2	Somewhat important
3	Moderately important
4	Very important
5	Vital

2.14.3 **Risks that could undermine these benefits**

The Maternity and Neonatal Programme Board overseeing the development of the business case considered risks associated with the additional workforce and refurbishment being proposed. Risks were assessed using a risk rating scale, which considers 'Likelihood' and 'Impact'.

Risk rating scales:

Rating	Impact	Likelihood
1	Negligible	Rare
2	Minor	Unlikely
3	Moderate	Possible
4	Major	Likely
5	Extreme	Almost certain

Risk Rating Key
High (15-25)
High Moderate (10-12)
Moderate (8-9)
Low Moderate (4-6)
Low (1-3)

These two factors were multiplied together to produce a risk rating, which noted in the table below. This rating will facilitate prioritisation of effort as the investment is implemented and identify means of mitigating and monitoring the risks as part of ongoing project management activities.

The highest rated risks are tabled below for reference. The mitigation for each of these risks is noted below. The Risk Register is included in Appendix B.

Risk ID	Risk Name	Description	Owner	Risk Likelihood	Risk Impact	Risk Rating	Mitigating Actions
001	Recruitment	Recruitment of required staff in NHS Highland across a range of disciplines may not happen as quickly as the service requires due to competing organisational priorities or external factors, such as the recruitment pipeline of staffing required to support safe staffing levels and contribute to a networked model of maternity care.	W&C Head of Operations	5	4	20	Alignment with recruitment strategy. Escalation of any timescale issues to Maternity & Neonatal Programme Board. Escalation of any risks or issues to joint programme board. Ongoing collaboration with NHS Grampian to leverage skill mix and alternative options where appropriate. Ongoing collaboration with NES to leverage skill mix and alternative options where appropriate. Monitor recruitment through People and

							Culture workforce dashboard.
003	Retention	Risk that retention rates may be affected while strategic improvements are implemented.	W&C Head of Operations	4	4	16	Colleague experience work launched pan W&C with support from Organisational Development to seek to address issues and "wicked problems." Strategic action-based plan will be formed once consultancy period closes.
004	Capacity	Capacity and active engagement from operationally based staff across maternity and neonatal services is required in order to realise the benefit of ongoing improvement work (e.g., Best Start).	W&C Head of Operations	4	4	16	Escalate any improvement related delays/issues and risks in this area to the Maternity & Neonatal Programme Board.
007	Ability to achieve continuity of carer	Due to current issues with recruitment and retention, continuity of carer is difficult to achieve on average due to lack of staffing resources to support consistency.	Director of Midwifery; W&C Clinical Director	5	4	20	Recruitment of key additional staff, and retention of staff currently in post, is the key enabler to achieving continuity of carer in Highland.
009	THC funding	Due to funding constraints with partner organisations, this may impact the level of support care that is offered to maternity and neonatal patients and their families	Chief Officer – Acute	5	4	20	Funding requested by way of this standard business case will start to mitigate this risk. Risk will be fully closed once required workforce is in post to sustain AHP workforce within maternity and neonatal unit.
010	Intelligence and Ease of Reporting	Due to the influx of dashboards in planning, intelligence support entailed with the NTC, and other competing priorities, the BI team may not be able to process the maternity and neonatal dashboard request as quickly as originally planned for.	Head of eHealth; W&C Clinical Director	5	4	20	The business intelligence support analyst proposed within the business case can mitigate an element of this risk.
011	Current maternity and neonatal facilities	The current maternity block restricts the efficiency and suitability of adequate, practical bed flow.	W&C Clinical Director; W&C Head of Operations; Head of Estates & Facilities	5	5	25	The capital planning element of the business case proposal offers a solution to this, thus improving the quality and experience of care received for maternity patients and their families.

Delivery of the identified objectives and monitoring/mitigation/elimination of all risks will be a critical element of enabling sustainable and robust NHS Highland maternity and neonatal services and contributing to the networked model of care delivery with NHS Grampian.

Performance against the benefits, and escalation of identified risks and presentation of newly identified risks (where applicable) will be monitored at the Highland Maternity and Neonatal Programme Board meetings which take place fortnightly and comprise clinical, non-clinical and executive membership.

The governance structures of this Programme Board are detailed in the Management Case. Joint risks that are shared between NHS Highland and NHS Grampian will be monitored at Joint Maternity and Neonatal Programme Board level.

2.14.4 **Constraints & Dependencies**

A redesign of service of this nature, will have constraints and dependencies which will inform the way forward. These constraints and dependencies have been considered by the project team and are set out below:

Constraints

- Proposed improvements to maternity and neonatal care to meet the needs of Highland women and their families and contribute to a networked model of care with NHS Grampian cannot be fulfilled without additional funding to refurbish the maternity & neonatal unit, recruit to substantive staff, and improve provision of midwifery led care through the establishment of an Inverness-based AMU.
- There is no under-croft or solum below the ground floor, which eliminates cost effective and expedient alteration to services
- The Maternity Block is bounded on north, south and west sides by emergency fire access roads, with a modular theatre and Main Theatre Suite extension (with Maternity offices on ground floor) to the east.
- All principal hospital underground services run parallel to the west elevation.
- Extending the current Maternity Block footprint is not possible as a result of the above referenced obstacles, leaving only the northwest elevation as a potential location to increase physical floor area, with support structure spanning the underground services.
- Utilising an existing building to carry out facility upgrades is constraining architecturally.

Dependencies

- Whether NHS Highland can safely allow choice for Moray women as part of establishing a networked model of care delivery will depend on Highland's ability to recruit to the proposed funded establishment to enable the staff to support safe care to meet the need of Highland women and their families and any additional demand as part of an integrated networked model with NHS Grampian (once clinically safe levels of staffing are in post).
- NHS Highland maternity and neonatal services is progressing culture improvement and recruitment plans to support these processes as key enablers in mitigating staff absence rates and difficulties in recruitment and retention.
- Service users, staff, and accountable executives to ensure communication is cascaded to advise of refurbishment, recruitment and decant updates.
- The additionality of staffing establishment required to enable more sustainable and robust Highland maternity and neonatal services is currently not funded recurrently.
- To enable the any significant refurbishment of the current Maternity Block accommodation, the decant of current services out of the Maternity Block is necessary.
- The central, first floor location of the Obstetric Theatre is the most convenient position, as it has the closest link to the Labour Suite, Neonatal Unit, and the main Theatre Suite.

2.15 Workforce Establishment

Establishing a workforce which can deliver the preferred service solution with the anticipated benefits will require an innovative strategy which includes training, development, recruitment, and retention to maximise the potential of NHS Highland to secure workforce resources in a competitive environment. This strategy will require collaborative working with partner organisations across the North of Scotland, and at a national level.

While both NHS Highland and NHS Grampian have identified additional workforce requirements across both Paediatrics and Obstetrics & Gynaecology to support the proposed changing models of service delivery across the region, it is recognised that recruitment of both substantive consultants and practitioners to support the basic and middle-tier rotas may be challenging.

Discussions are ongoing with NHS Education for Scotland (NES) colleagues to explore opportunities for expansion of training posts to support the current and future workforce, recognising the complexity of future workforce needs analysis, changing specialty curricula and programme design, impact of increasing requests for LTFT training and curriculum mapping across the current and proposed services in the North of Scotland (NOS).

While expansion of training post numbers will help to address the future workforce needs, there is an inevitable lag from recruitment to enabling a workforce of sufficient seniority and competence to meet the service needs, alongside an immediate requirement for additional supervision capacity.

A potential solution which could be explored in the interim to support workforce recruitment and resilience may be the development of a local Certificate of Eligibility for Specialist Registration (CESR) pathway programme creating alternative routes of access for both local and international colleagues to develop their skills, competence, and accreditation within specialty.

This would benefit from investment in funded sessions for a CESR lead for NHS Highland, supported orientation, induction, and shadowing programme for IMG colleagues to promote recruitment and retention to the region. If successful, this programme could potentially be expanded across other specialties to support workforce development.

There are local initiatives within other services which have successfully upskilled the non-medical workforce to perform enhanced roles following 2-year training and upskilling programmes. These successful initiatives provide a deliverable model of workforce development which will be considered for implementation across the proposed Maternity and Neo-Natal service change.

2.15.1 **Aim High Aim Highland**

In response to ongoing recruitment challenges particularly with nursing roles, for the National Treatment Centre, Highland, NHS Highland launched their ‘Aim High, Aim Highland’ campaign to promote the work-life balance opportunities that exist in the Highlands, whilst emphasising the career fulfilment and job satisfaction available.

Reaffirming the prospect of a fulfilling life in the Scottish Highlands, the campaign played a key part in filling the 208 new jobs that were created with the opening of the NTC-Highland in April 2023.

The service engaged an external partner to develop a recruitment programme named ‘Aim High, Aim Highland’ which was a national and international recruitment campaign which raised the visibility of NHS Highland as an aspirational place to work,

This model of workforce recruitment will be utilised to provide the staffing levels set out in this Business case for the preferred service solution.

3. ECONOMIC CASE

3.1 Introduction

This section summarises the options considered by the stakeholders, to deliver the preferred service solution. This involved consideration of the staffing implications, and the options available to provide appropriate facilities to enable deliver of the service improvements.

3.2 Preferred strategic /service solution

Service Change Proposal (Options Appraisal) workshops was held with stakeholders to assess the proposed service solutions against the available options to establish the preferred service solution. A summary of the outcomes is summarised in the sections below:

3.2.1 **Achieving Sustainable Maternity and Neonatal Services**

To contribute to a Networked Model of Care with NHS Grampian, and to support a sustainable and robust workforce to meet the needs of Highland women and their families, additional workforce will be required. developed.

Workforce modelling consultancy activities and discussions have been undertaken across all service groups that have a professional stake in the delivery of maternity and neonatal services. The purpose of the workforce modelling consultancy activities was to understand from the service leads what the workforce requirements would be to support more robust and sustainable models of care for Highland women and their families and what staffing resource would be required to contribute to a networked model of care with NHS Grampian.

The current workforce profile within the context of delivering maternity and neonatal services is mixed in demographics, contract type and skill. The current level of staffing within Raigmore's maternity and neonatal services lacks the necessary robustness to be able to cope with enabling a service that aims to improve quality and care outcomes for women and babies, and to ensure the options of women's care and delivery preferences are maximised.

To fully offer women in Highland a spectrum of maternity services through the addition of an AMU at Raigmore Hospital, a budgeted staffing establishment by way of investment will need to be considered to deliver clinical and support services to women and their families in the Inverness and surrounding areas who choose to give birth in a midwifery-led unit.

To enable the services to deliver clinically excellent, sustainable, cost effective and equitable care, additional staffing is required within the following service areas in the context of maternity and neonatal to better meet the needs of the Highland population:

- Early Pregnancy Nursing and Sonography & Scanning
- Obstetrics & Gynaecology
- Neonatology & Paediatrics
- Midwifery
- Administrative Support Services
- Neonatal AHP Working Arrangements with The Highland Council
- Infant Feeding Support
- Psychology Services
- Pharmacy Support
- Portering Support
- Corporate-Based Workforce Requirements to Support Recruitment, Retention, Colleague Experience and Strategic Implementation of National Strategy
- Project Management and Project Support

- Analytical and Digital Improvement to Enable High-Quality and Efficient Maternity and Neonatal Services
- Communications and Engagement Support
- Allied Health Professionals

3.2.2 **Facilities Modernisation**

The project group considered how to provide modern facilities which would enable the service change and support the maternity and neonatal teams in their delivery of the strategic objectives e.g., Best Start, Network Enabled Care with NHS Grampian and the recommendations in the Ockenden Report.

Over the course of the planning cycle associated with developing this business case and the wider Maternity and Neonatal Programme, workshops and discussions took place with stakeholders across the realm of maternity and neonatal service delivery, including midwives, consultants, operational managers, and executive directors. Further engagement workshops and regular, planned, active communication with this stakeholder group has been scoped and developed into a Communications and Engagement Plan.

A Communications and Engagement Plan is actively being scoped to keep the public well informed regarding the planned refurbishments to take place. This will be particularly important in the recognition of the Raigmore maternity and neonatal refurbishment and wider strategic improvement work as proposed within this business case.

Also included in the Communications and Engagement Plan is a course of actions associated with collecting and using patient experience to inform improvement opportunities within maternity and neonatal services. Utilising lived experience and engaging with the population directly helps make NHS Highland maternity services more visible and further informs of a qualitative and quantitative evidence-based approach of using quality improvement methodology to create more sustainable services for patients who will use NHS Highland's maternity and neonatal services in the future.

The Maternity and Neonatal service know that increasing activity into the service as part of supporting a networked model of care delivery with NHS Grampian cannot be accommodated without taking forward the recommendations of the review to increase the clinical space (in addition to the increased number of medical and nursing staff as set out in 3.2.1.

The required outcome from refurbishing the existing Raigmore Hospital maternity and neonatal unit is to provide an environment where women and their families feel more comfortable has been developed in line with national and local strategy and policy.

As an early adopter for Best Start, NHS Highland needs to follow guidance on room sizes and bed spacing, which are currently below the recommendations. As part of the capital proposal within this business case, spacing and room sizes will be addressed to facilitate compliance with the associated guidance.

Refurbishing the existing maternity and neonatal unit in Raigmore Hospital will create a more sustainable service through ensuring the refurbishments contained within this proposal meet national guidance and clinical standards as far as is practical within the physical constraints of the existing building.

3.2.2.1 Facilities Modernisation: Options Appraisal

An Options Appraisal was undertaken to consider the delivery options available to the project group to achieve the objective of providing modern clinical space to enable the preferred service solution.

This Options Appraisal investigated the options to provide additional delivery/birthing rooms (and associated accommodation where applicable) en-suite facilities, transitional care space and training and education space to accommodate the needs of the Highland population and workforce.

This appraisal focusses on value-based approaches to ensure the needs of the women and their families are met, and they are cared for in an environment which supports choice and patient centred needs by enabling the implementation of National strategy and local policy.

The Options Appraisal also considered the accommodation required to increase capacity within the existing Labour Suite and increase in size of the Neonatal Unit cot spaces to modern and compliant standards.

Through reference to strategic policies and guidance, and a review of the existing facilities the following refurbishment options were identified:

1. Do nothing: the status quo
2. Conversion of the current administrative, staff changing and medical record accommodation within the ground floor, relocating the current occupants and services to alternative accommodation. Refurbishment and extension/increase in floor area of both the Labour Suite and neonatal unit
3. Conversion of Ward 9B. This option will require the relocation of the current specialties to a location to be identified, within the main Ward Block.
4. The provision of a stand-alone modular building that would accommodate the delivery suites with all associated services and accommodation.

An analysis of these options is presented in the table below:

1. Do nothing: the status quo	
Heading	**Rationale**
Description	Continue to provide maternity and neonatal services in the same way from the existing facilities layout without change.
Main Advantages	Familiarity for colleagues and historical maternity and neonatal patients.
Main Disadvantages	Missed opportunity to provide improved services and premises. Poor accommodation and use of accommodation. Not sustainable. Not considerate of national strategic recommendations. Current risks remain, identified improvement opportunities are not realised.
Conclusions	The do nothing/minimum is not a viable option. It delivers none of the organisational goals.
2. Conversion of the current administrative, staff changing and medical record accommodation within the ground floor, relocating the current occupants and services to alternative accommodation. Refurbishment and extension/increase in floor area of both the Labour Suite and neonatal unit	
Heading	**Rationale**
Description	Conversion of ground floor to accommodate additional patients & refurbishment of Neonatal Unit and Labour Suite.
Main Advantages	Provides compliant neonatal cost spaces and services, compliant Birthing Rooms and Alongside Midwife Led Maternity rooms, and additional examination rooms on ground floor. Enables a physical environment to support national and local strategy delivery.
Main Disadvantages	Invasive works requiring significant need to decant service.
Conclusions	Delivers cohesive accommodation with established and expedient, relevant adjacencies.
3. Conversion of Ward 9B	
Heading	**Rationale**
Description	Conversion of Ward 9B. This option will require the relocation of the current specialties to a location to be identified, within the main Ward Block.
Main Advantages	Potentially less inconvenience caused by refurbishment works.
Main Disadvantages	Restricted available floor area. Prevents any likelihood of implementing other Best Start recommendations.
Conclusions	Does not deliver vision to provide space that is multi-functional and

	adherent to strategic and government direction.
4. Stand-alone building	
Heading	**Rationale**
Description	The provision of a stand-alone modular building that would accommodate the delivery suites with all associated services and accommodation.
Main Advantages	Potentially less inconvenience caused by refurbishment works. Reduces decant requirement.
Main Disadvantages	Cost and separation of services. Suitability of site and impact on underground services. High cost expected. Building timescale considered to be the longest when compared to the other options.
Conclusions	Raigmore Estate does not have the area to accommodate an additional building of the size of what would be required for a maternity and neonatal area.

3.2.2.2 Discounted Options

- Option 3 was discounted because this option offered insufficient floor space to enable construction of compliant refurbished space.

- Option 4 was discounted because existing principal underground services pass through the ground adjacent to the southwest of the Maternity Block, and due to the impact to privacy within the existing Wards 9 & 10 and cost.

3.2.2.3 Preferred Facilities Option to enable the Strategic Service Solution

The preferred option is Option 2: Conversion of the current administrative, staff changing and medical record accommodation within the ground floor, relocating the current occupants and services to alternative accommodation. Refurbishment and extension/increase in floor area of both the Labour Suite and neonatal unit.

The overall area to be refurbished, focussing on the Labour Suite and Neonatal Unit, is 3000 m² plus a new construction addition of 300m² of first floor accommodation, increasing the complement to 15 compliant cot spaces within the Neonatal Unit (including isolation facilities) and 7 fully compliant birthing rooms (including isolation facilities).

This option involves a realignment of current accommodation across the three principal areas within the current Maternity Block and includes the following changes to the block on the first and ground floors:

Ground Floor

- A new self-contained examination/consulting clinic to be created within central core area to facilitate antenatal high-risk specialist clinics (e.g., SGAs, Diabetes, fetal medicine, maternal medicine, etc.).
- Refurbishment of Ward 9.
- Designated space to house transitional care.

First Floor

- Provide additional floor space to Labor Suite and Neonatal departments.
- Create fully compliant delivery rooms.
- Provide one delivery room with isolation room facilities (anteroom and separate ventilation)
- Provide additional, compliant neonatal cot spaces, each with high dependency medical gases.
- Provide two compliant neonatal isolation rooms.
- Widen corridor to provide improved circulation within neonatal.

- Provide addition ‘parent craft’ overnight accommodation for families.
- Increased staff changing facilities.
- Improve bereavement environment and provide SIMBA room within Ward 10.
- Refurbishment of Ward 10.

Maternity Block

- Complete the fire sprinkler installation to the remainder of the building, to offer 100% safety coverage.
- Subdivide fire compartments to enhance the fire safety and fire evacuation strategy.
- Replace fabric finishes – flooring, ceilings, lighting, cabinetry

3.2.2.4 Advantages and disadvantages of preferred option

Option 2: Conversion of the current administrative, staff changing and medical record accommodation within the ground floor, relocating the current occupants and services to alternative accommodation. Refurbishment and extension/increase in floor area of both the Labour Suite and neonatal unit	
Advantages	**Disadvantages**
Increases provision and provides compliant patient areas and facilities.	Depends on appropriate decant to enable works to be carried out.
Updates 34-year-old accommodation to deliver today’s healthcare services in line with current clinical and facility guidelines.	Displaces records, office, and storage accommodation.
Offers multi-purpose spaces to provide patient isolation, clinical examination, and staff training.	
Minimises impact on other wards, areas, and surrounding features.	
Creates an environment where women and their families are more comfortable.	
Enables an improved bed flow system across maternity and neonatal services.	

3.2.3 Midwifery Led Care

A service needs analysis was undertaken to review the options for enhancing choice for women and midwifery led care in the Inverness area. Currently the service model is resourced through a consultant led unit in Raigmore Hospital. Throughout North Highland there are Midwifery Led service in 3 main hubs, Caithness, Lochaber and Syke and Lochalsh.

There are ongoing workstreams to enhance community services within Inverness to support day care services to enable women to access care out with Raigmore. This is a model which works well in other areas of North Highland. It is a tried and tested model to work towards for the women of Inverness.

3.2.3.1 Midwifery Led Care: Short Life Working Group

To focus specifically on the intrapartum care women are offered, a Short Life Working Group (SLWG) was established, membership comprised Professional midwifery leads, Senior Managers, Clinical Leaders (medical), Lead Midwives, Midwifery Managers, Estates, Finance, Human Resources together with Programme Management support as tabled below:

Name	**Role**

Grace Barron	Programme Manager
Karen King	Associate Director - Midwifery
Isla Barton	Director Mid-Wifery / Chair
Karen Cruickshank	Divisional General Manager
Caroline Tait	Interim Divisional Nurse/Midwife Manager
Carole Murphy	Lead Mid-Wife (Acute)
Laura Menzies	Lead Mid-Wife (Community)
Susan Clifton	Lead Accountant for Acute
Darren Thomas	Lead Obstetrician
Rashmi Srivastava	Clinical Director for Women's and Childrens Services
Alan Wilson	Director of Estates, Facilities and Capital Planning
Eric Green	Head of Estates

A variety of approaches were utilised to determine the model which sat most comfortably with women, families, and the multi-disciplinary clinical teams across Highland.

Views of women who are currently accessing our services across NHS Highland were sought. It was felt to be beneficial to share the questionnaire widely and not limit it to a specific cohort of women. A message was sent through Badgernet to alert all women to the engagement which was underway. Community teams and specialist midwives also held focus groups to maximise engagement. Women could return the questionnaire anonymously through a generic email account. They were asked to put in order of preference their choice of model of care.

Senior professional leaders engaged with staff meetings. Midwifery teams and senior medical teams were consulted. Staff were also given the opportunity to respond to a short questionnaire which enabled them to feedback their preference for service delivery model. These responses were anonymous

The vision was to establish further space for midwifery led care, which will enable access for women to deliver in a space they feel more comfortable in and aligns with national and local strategy and policy in being able to offer a full range of delivery choices to Highland women and their families.

To identify the preferred option to achieve this vision, the SLWG considered 3 options which are summarised in the Table below:

3.2.3.2 Midwifery Led Care: Options Appraisal

It was agreed that there were four options which could be considered and through engagement with multi-disciplinary teams across the services the following table was developed. An analysis of these options is presented in the table below.

1. Do Nothing: The Status Quo	
Heading	**Rationale**
Description	Continue to provide maternity and neonatal services in the same way from the existing facilities without change. Women residing in Inverness and surrounding areas do not have access to deliver in an easily accessible midwifery led unit. Barrier of care during delivery between community and acute.
Main Advantages	Familiarity for colleagues and historical maternity and neonatal patients.
Main Disadvantages	Missed opportunity to provide improved services and premises. Missed opportunity to mitigate pressure in Raigmore's main hospital, and more specifically maternity unit. Not sustainable and not maximising the access to women's choices. Not considerate of national strategic recommendations. Current risks remain, identified improvement opportunities are not

	realised.
Conclusions	The do nothing/minimum is not a viable option. It delivers none of the organisational goals or align to national strategy.
2. Midwife Led Care Within the Consultant Led Unit	
Heading	**Rationale**
Description	Midwife led care within the consultant led unit The development and promotion of a clearly defined midwife led care model within the consultant unit. This model of care would ensure all women are risk assessed and allocated to an appropriately level of care. Midwife led care would promote normal physiological labour processes and protect against unnecessary intervention. This follows a concept rather than a defined space or place of care.
Main Advantages	This concept can be applied regardless of setting so not reliant on any infrastructure change. Ensures that promotion of normal physiological birth and prevention of unnecessary intervention becomes part of the culture and way things are done.
Main Disadvantages	Reduces available bed space within the unit. Reduces available office/service space within the unit. Space constraints to support additional staff. Does not mitigate pressure from unit.
Conclusions	Was not the preferred option of choice when assessed via the workforce and women/their families who were surveyed as part of options appraisal process.
3. Establishment of an Alongside Midwifery Unit (AMU) Located at Raigmore Hospital	
Heading	**Rationale**
Description	This model of care would see women being provided with labour and birth care by a team of midwives, in a separate unit alongside or close to the maternity unit in Raigmore. The unit would be situated on the Raigmore site, so it has access to obstetric, neonatal, and anaesthetic care. The unit would be staffed by midwives, entirely separately to the consultant led unit, would have set criteria for admission and transfer and clear guidelines for midwifery led care.
Main Advantages	The environment would be more conducive to midwifery led care. The admission criteria could be more flexible than with a freestanding CMU. It may be more attractive to women as it is close to medical and theatre support if required.
Main Disadvantages	Staffing a consultant led unit and an alongside unit may be challenging. Running both units concurrently would result in additional staff costs.
Conclusions	Delivers the strategic goals of the organisation, adheres to national strategy, adheres to clinical guidance.
4. Community Midwifery Unit (CMU) in Inverness or Surrounding Area	

Heading	Rationale
Description	This model of care would see women being provided with labour and birth care by a team of midwives in a unit not situated in a hospital or site with an obstetric unit or neonatal unit. Where the woman needs obstetric or anaesthetic care or the baby requires neonatal care, they need to be transferred to the Consultant Led Unit in Raigmore. The unit would be staffed by midwives working in the community and the facility would also provide a hub for other maternity care for the women on the midwives' caseload. The anticipated number of women would most likely require an on-call model of care. The CMU would have set criteria for admission and transfer and clear guidelines for midwifery led care.
Main Advantages	The environment would be more conducive to midwifery led care. It would offer full choice of place of birth for women in the Inverness and Inner Moray Firth area. The hub would serve the pregnant population in the community for ante-natal and post-natal care, meeting recommendations of Best Start.
Main Disadvantages	The on-call model of care may not be attractive for recruitment. Additional staffing and build/refurbishment costs. Risk entailed should an intrapartum transfer need to be made during delivery.
Conclusions	Whilst this is the second most popular option according to the preferences of the NHSH maternity and neonatal workforce, this was the least desirable preference according to the women and their families who were surveyed as part of the options appraisal process.

3.2.3.3 Midwifery Led Care Preferred Option to enable the Strategic Service Solution

The preferred midwifery led care option of the population and maternity and neonatal workforce was Option 3, Establishment of an Alongside Midwifery Unit, located Raigmore Hospital.

This consists of the following features in line with providing safe, high quality guideline concordant care:

- 2 delivery rooms with the ability to flex according to the preferences of women and their families.
- A waiting area for patients.
- Compliant with spatial guidance in relation to maternity care.
- Located at Raigmore Hospital, which will help mitigate any risks that may arise during delivery. due to the proximity of the consultant-led unit.
- Will allow for increased provision of midwifery practice models.
- Will result in less likelihood of interventions.
- Less risk entailed in recruitment due to staffing and skillset required who work in an AMU.
- Women with a low-risk pregnancy will have the access to choose whether they would like to deliver in a comfortable environment, thus mediating pressure from the maternity unit.

3.2.3.4 Advantages and disadvantages of preferred midwifery-led care option

This model of care would see women being provided with labour and birth care by a team of midwives, in a separate unit, alongside or close to the maternity unit in Raigmore.

The unit would be situated on the Raigmore site, which will enable access to obstetric, neonatal, and anaesthetic care if required based on the individual need of the woman, her delivery and new-born.

The unit would be staffed by midwives and nurses, entirely separately to the consultant led unit, would have set criteria for admission and transfer and clear guidelines for midwifery led care.

Option 3: The Establishment of an Alongside Midwifery Unit (AMU) Located at Raigmore Hospital	
Advantages	**Disadvantages**
The environment would be more conducive to midwifery led care, as opposed to a model of midwifery led care within the consultant led unit.	The unpredictable nature of labour and birth can be challenging. There may be times where there are no women and other times no beds.
The admission criteria could be more flexible than with a freestanding CMU which will help mitigate pressure away from the Maternity and Neonatal Unit.	Staffing a consultant led unit and an alongside unit can be challenging and experience from other areas is that the AMU would close if there was competition for staff.
It may be more attractive to women as it is close to medical and theatre support if required.	Running both units concurrently would result in additional staff costs.
Effective midwifery led care would lead to a reduction in intervention including caesarean section. This could create an opportunity to see financial savings in clinical and theatre time and potentially a more efficient use of resources with less use of obstetric, anaesthetic and theatre time.	
The establishment of an AMU on Raigmore's estate will create a more sustainable service through mitigating pressure in the main maternity and neonatal unit whilst ensuring the AMU meets national guidance and clinical standards. The AMU could provide 2 delivery areas and patient facilities, a waiting area, and staff facilities, including administrative space.	
The preferred option of an AMU will enhance women's options and experience of care. It would also enable NHS Highland to ensure midwifery led care is offered in line with the national strategic requirements in Scotland.	
The establishment of an AMU will mitigate the issues outlined in Current Arrangements in relation to patient flow by releasing a portion of low-risk demand currently being treated in the maternity and neonatal unit within Raigmore into a separate area that is midwifery led once constructed and safe care pathways have been established.	
An AMU would allow the women of Highland to have a choice of where to birth. Many units in Scotland have this model and many of our midwifery teams have worked in these settings.	

The Birthplace study was designed to answer questions about the risk and benefits of giving birth in different settings. It focused particularly on birth outcomes in healthy women with straightforward pregnancies who are at 'low risk' of complications. It shows that for women who have a planned birth in a midwifery unit they have significantly fewer interventions than women who planned birth in an obstetric unit.	
NHS Highland have one of the higher intervention rates in Scotland. An AMU is an opportunity to embrace midwifery led care with appropriate Consultant Midwifery leadership to reduce the intervention rates.	
AMU criteria can be more flexible that of that of a freestanding midwifery unit, this then offers more women an element of choice for their preferred place of birth.	

4. Financial Case

4.1 Overview

The Financial Case considers the affordability of the proposed investment.

NHS Highland have considered the affordability of this proposal by undertaking a review of the financial implications of investment, both capital and revenue.

The capital and revenue investment required to achieve the strategic objectives are set out in the following sections. These costs are presented as indicative only and will be reviewed annually.

On a purely financial basis, the 'Do Nothing' option does give the lowest recurrent revenue impact and also the lowest lifetime costs. This does not provide any improvement or meet any of the investment objectives so is only used as a baseline for measuring the other options.

4.2 Revenue Impact

There are considerable staff costs associated with all parts of this development and for this Standard Business Case, the costs have been calculated as based on 2022/23 pay scales including all employer's costs and also allowances for leave at 22.5%.

Staff costs will be continually reviewed as this proposal is implemented to align with the requirements of the guidance and strategies outlined in the Strategic Case. Non-pay, and consumables, have been included in the financial modelling, from the costs of the services with projections based on pro-rata activity levels.

The resources required to deliver the capital element of the project investment are included within the capital cost estimates.

4.3 Recurring Revenue Costs

Indicative workforce costs have been developed with colleagues in NHS Highland Finance, using workforce modelling tools. The costs for the proposed Workforce Revenue Investment and Non-Pay Areas are stated below.

The proposed workforce revenue investment will cost approximately £3,792,632. A detailed breakdown of these cost areas can be found in Section 4, and this will provide staffing levels required to contribute to a networked model of maternity and neonatal care through whilst addressing NHS Highland Maternity and Neonatal Safe Staffing Levels.

Further recurring revenue costs of £456,811 have also been identified in addition to £606,684 of non-recurring revenue costs.

Table 4.1: Recurring Revenue Costs

Revenue Costs	WTE	Recurring Costs £'s	Non Recurring Costs £'s
Workforce	61.50	3,763,358	
Laptops for Staff (full setup)			23,294
Digital Improvement Initatives		70,498	528,367
Supplies & Equipment as a result of moving location of Antenatal Clinics			55,023
Support Costs (10%)		383,386	
Total Revenue Costs	**61.50**	**4,217,242**	**606,684**

4.4 Summary of Capital Costs

Indicative capital costs for the investment in the facilities are £4.95m including VAT, professional fees, equipment, and displaced staff services.

This investment will deliver on the preferred facilities options to enable the delivery of the service solution which are:

- Option 2: Conversion of the current administrative, staff changing and medical record accommodation within the ground floor, relocating the current occupants and services to alternative accommodation. Refurbishment and extension/increase in floor area of both the Labour Suite and neonatal unit

- Option 3: The Establishment of an Alongside Midwifery Unit (AMU) Located at Raigmore Hospital

Table 4.2: Capital Costs

Capital Costs	Total Costs (£)
Capital Required to Enable Raigmore Decant and Refurbishment & Establish an AMU on Raigmore's Estate	4,950,000

Any other costs required to upgrade the facilities to a compliant standard will come from the existing capital allocations for Backlog Maintenance works.

4.5 Financial contributions

The capital costs of the investment will be through a capital contribution from the Scottish Government.

Table 4.3: Additional Staffing for a Networked Model of Maternity and Neonatal Care

WTE	Description	Recurring Costs £
	Sonography, Scanning & Early Pregnancy	
0.1	Band 7 Sonographer to deliver early pregnancy ultrasound sessions that are currently a cost-pressure	6,800
0.9	Band 7 Sonographer to delivery obstetric ultrasound sessions	61,196
1.0	Band 6 Midwife to support antenatal clinic capacity, including specialist clinical activity (e.g. maternal medicine, diabetic patients, multiple pregnancies and small for gestational age activity)	57,053
0.1	Band 6 Midwife to support funded capacity to meet antenatal screening demand	5,705
	Band 3 - Band 4	3,170
	Band 7 - Band 8A	12,564
	Band 8A - Band 8C	31,360
1.0	Band 6 Trainee Sonographer to facilitate sonography/scanning training programme	59,461
0.6	Band 6 Early Pregnancy Nurse (incl. 1.0 WTE capacity to care for early pregnancy miscarraiges)	34,232
	Obstetrics & Gynaecology	
3.0	Obstetrics & Gynaecology Consultants	365,656
3.2	Obstetrics & Gynaecology Specialty Grade Doctors	246,849
1.5	Obstetrics & Gynaecology Junior Grade Doctors	133,706
	Paediatrics	
4.0	Paediatric Consultants	487,541
3.1	Specialty Doctors	239,135
3.0	Junior Grade Paediatric Doctors	267,412
	Midwifery	
	Midwifery Resource to Support Early Intervention	
2.0	Band 8B Consultant Midwife	189,329
1.0	Band 7 Specialist Lead Midwife	67,996
	Midwifery Resource to Support Women and their Families with Bereavement	
1.0	Band 7 Bereavement Lead Midwife	67,996
	Midwifery Resource to Support Public Protection (including Child Protection and Violence Against Women)	
1.0	Band 7 Specialist Lead Midwife	67,996
	Midwifery Resource to Support Outpatient and Day-Case Activity	
2.0	Band 6 Midwife	114,105
1.0	Band 4 Maternity Care Assistant	39,166
1.0	Band 2 Healthcare Support Worker	33,124
	Midwifery Workforce Requirements to Support an AMU 24/7	
5.5	Band 6 Midwife	283,397
5.5	Band 4 Maternity Care Assistant	197,010
5.5	Band 3 Healthcare Support Worker	187,807
	Midwifery Workforce Requirements to Support Recruitment and Retention and Clinical Education Efforts	
1.0	Band 7 Midwife Clinical Educator	67,996
0.5	Band 6 Practice Education Facilitator Midwife	28,526
	Administrative Support Services	
2.0	Band 4 Obstetrics & Gynaecology Administrative Support	78,331
1.0	Band 4 Paediatrics Administrative Support	39,166
	Neonatal AHP Working Arrangements with The Highland Council	
0.7	Band 7 Occupational Therapist	47,597
0.4	Band 7 Dietetician	27,198
0.7	Band 7 Physiotherapist	47,597
0.3	Band 7 Speech and Language Therapist	20,399
	Infant Feeding Support	
1.2	Band 6 Infant Feeding Advisors	68,463
	Pharmacy Services	
0.4	Band 7 Pharmacist	27,198
0.5	Band 3 Pharmacy Support Worker	17,998
	Portering Services	
1.0	Band 2 Porter	33,124
61.5	**Total Recurring Workforce Costs**	**3,763,358**

5. Management Case

5.1 Overview

This section summarises the planned management approach setting out key personnel, the organisation structure and the tools and processes that will be adopted to deliver and monitor the scheme.

5.2 Programme Governance

This programme of work, including the development of this standard business case, is governed by a Programme Board chaired by the Chief Officer of Acute, led by the Head of Strategy and Transformation and facilitated by the Maternity and Neonatal Programme Manager. Formal membership of the Programme Board also consists of the following roles within the context of maternity and neonatal services:

- Deputy Medical Director - Acute
- Board Nurse Director
- Director of Midwifery
- Associate Director of Midwifery
- Director of Estates, Facilities & Capital Planning
- Head of Estates
- Deputy Director of Finance
- Head of Communications
- Programme Manager
- Service Planning Manager
- Lead Health Analyst
- Head of Operations: Women and Children`s Directorate
- Service Manager(s): Obstetrics & Gynaecology, Neonatal services & NNU, Paediatrics.
- Clinical Director – Women's and Children's
- Lead Consultant - Obstetrics & Gynaecology
- Consultant Paediatrician - NNU
- Obstetrics & Gynaecology Consultants
- Acute Staff-Side Lead
- Senior HR Advisor

The scope of the maternity and neonatal programme is to:

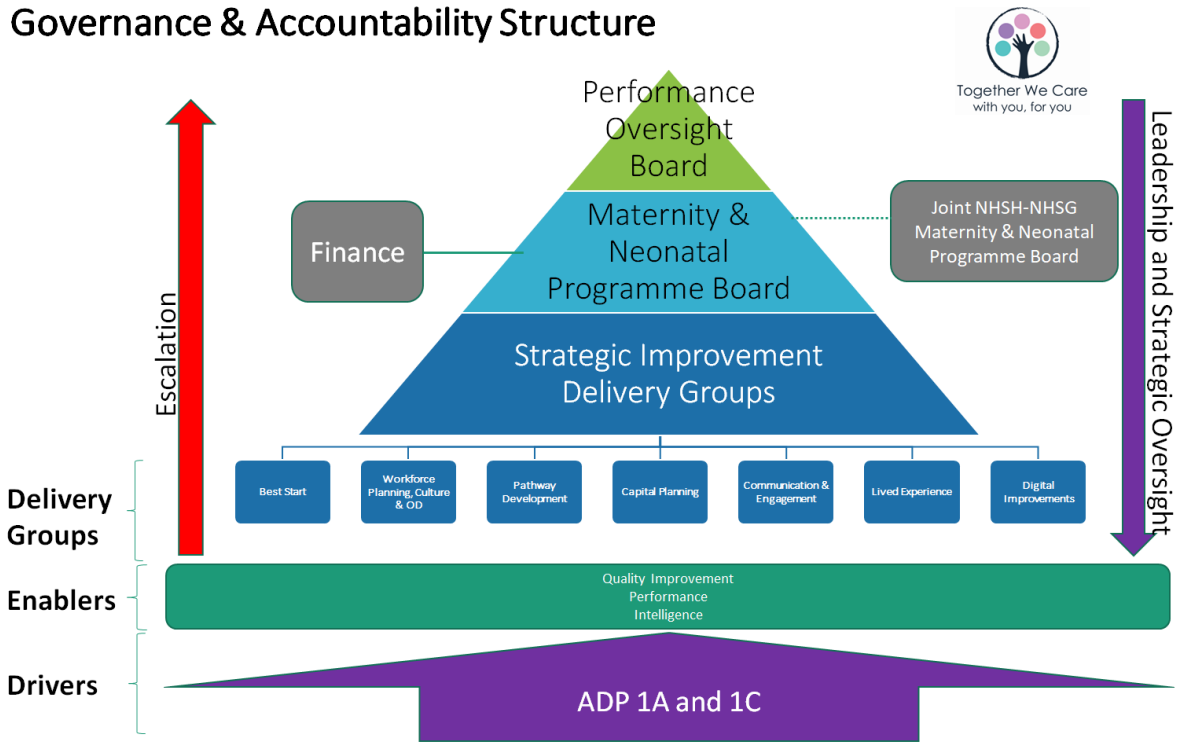
- Provide leadership in delivering the review to improve outcomes for people who engage with maternity services
- Use meaningful lived experience to support our implementation by engaging with our service users at all stages and engaging closely with our 3rd sector colleagues to ensure the patients voice is at the heart of the maternity programme oversight board
- Establish robust arrangements which provide assurance to internal and external stakeholders that quality improvements that are strategically led are being delivered locally using a value-based approach. It will set and agree milestones and deliverables and track progress against them in line with the NHS Highland Annual Delivery Plan.
- Provide oversight to the development of the business case to improve the infrastructure necessary to create the environment required across our geography
- Provide strategic planning oversight to the Raigmore refurbishments contained within the standard business case and utilise the Programme Board to escalate risks that may impede the progress of the construction
- Ensure our workforce is supported through a workforce plan that encompasses organisational development, recruitment, listening and engagement

- Use intelligence to understand needs of our population, current themes of risk areas (e.g., Datix and complaints) balancing the demands on the system for patient care and wellbeing and the need for sustainable services
- Ensure any key risks identified requiring further guidance are escalated to the Performance Oversight Board with regular reporting to other groups as required
- Ensure planned improvements in quality and outcomes are achieved, with supporting intervention for significant risks to benefits realisation. This will involve reviewing all associated workplans and the risk register.
- Provide oversight to the Best Start Action plan to ensure we are supporting this throughout NHSH
- Promote the development and delivery of best practice, evidenced based care, with an emphasis on ensuring equitable, consistent high quality service provision and a seamless transition in care across the whole patient pathway

There are 7 strategic improvement delivery groups that report to the Maternity and Neonatal Programme Board. The remit of these group's is pivoted on ensuring the effective use of resources that benefit patients and their carers to create a connected, coordinated and fully integrated maternity service for the population it serves.

The Maternity and Neonatal Programme Board has the function to escalate any key risks to meeting key delivery milestones in contributing to a networked model of maternity and neonatal care to the Joint NHSH-NHSG Maternity and Neonatal Programme Board, which meets monthly with key cross-functional clinical and operational membership from both boards. More information on the structure of the Joint NHSH-NHSG Maternity and Neonatal Programme Board can be found in Appendix 7.

Figure 5.1: Governance Structure



5.3 Project Management Arrangements

NHS Highland have formed an experienced Project Team to develop this Standard Business Case and deliver the proposed investment.

These project management arrangements are supplemented by the appointment of Thomson Gray as the Lead Advisor for the project, to undertake the roles of Project Manager, Cost Advisor & NEC Supervisor.

This appointment was made following a competitive tendering selection process in 2022. In addition to these roles, a Consultant CDM Advisor will be appointed to advise NHS Highland of their duties as a Client under the CDM 2015 regulations.

NHS Highland are ready to proceed with the next stage of the project, and have commitments from the Project Team, Project Board, and Lead Advisor Team that resource and availability to continue with the delivery of the project.

The approach to the management of the capital project is based on the principles and requirements of Health Facilities Scotland 'Frameworks Scotland 3 under an NEC 3 contract. In brief, this involves the appointment of a "Principal Supply Chain Partner" (PSCP) who will be responsible for delivery of the scheme (including the design and construction) using their own supply chain.

All parties are obliged to work together in a collaborative manner to deliver the project.

5.4 Project Governance

A Project Board is in place to provide project governance, oversight, and accountability. This Project Board will be supplemented with members experienced in the delivery of construction and refurbishment projects in live acute healthcare environments.

The Project Board Meetings will receive monthly reports on progress of the works, requirements for change control, derogation from standards and any decisions that may be required in relation to the project investment objectives.

5.5 Communication and Engagement

In terms of the development of the project to date, the Standard Business Case has been developed through consultations with a number of internal and external stakeholders, and in particular the clinical stakeholders in the Maternity service.

Communication with these stakeholders will continue through the project life cycle of the investment, and the development of the design information. Communication and Engagement will also extend to sub-contractors, consultants, and suppliers as appropriate to help deliver the investment in line with the strategy set out within this document.

5.6 Project Programme

The anticipated project programme is noted in the table below:

Table 5.1: Programme Milestones

Submission of Business Case	**April 2023**
Approval of Business Case	**May 2023**
Start on site (Phase A)	**June 2023**
Completion date	**June 2025**
Services Commencement	**July 2025**

This programme is subject to the necessary approvals being in place.

5.7 Reporting

The Project Manager will submit monthly reports to NHS Highland for review and discussion at the Programme Board Meeting. The report will encompass:

- Executive summary highlighting key project issues
- A review of project status including:
- Programme and Progress
- Key Issues
- Cost
- Health and Safety

Project Team Meetings will be scheduled monthly to maintain clear communication amongst the stakeholders and provide a forum to discuss any arising issues and provide enough information to allow key decision makers to direct the project.

In addition, the Cost Advisor will submit monthly cost reports to record cost movement against projected cash flow.

5.8 Risk Management

The project stakeholders have undertaken an exercise to establish the key risks associated with the proposed investment. Key business, service, environmental and financial risks have been established. A risk register has been developed, based on the preferred option. It is intended that detailed consultation will take place to understand the clear allocation of risk between the parties and the required actions.

The Project Risk Register is included in Appendix B.

The project team will manage these risks through a series of workshops to establish, monitor and mitigate these risks as the project develops.

The standard format for the Framework Scotland Joint Project Risk Register will be implemented as a Risk Management tool and register.

5.9 Post Project Evaluation

Post Project Evaluation is typically carried out six months after project completion, and this will be undertaken with reference to the SCIM Post Project Evaluation Manual which provides detailed guidance on the subject.

Project evaluation provides an opportunity for the project team and stakeholder groups to reflect on the lessons learnt at various stages of the project. The purpose of such evaluation is to apply the positive aspects of the project to future projects, and likewise remove where possible the negative aspects or aim to mitigate the impact where these cannot be removed. The evaluation will review the project holistically and will include discussion on the following:

- Stakeholder feedback on the new facilities
- IPC feedback on the facilities and the design/construction process
- Comment on project schedule
- Comments on cost control
- Change management system
- Major source(s) of changes/variations
- Overall risk management performance
- Overall financial performance
- Communication issues
- Organisational issues

The post project evaluation exercise will ideally be facilitated through workshops and open and frank discussions with the project stakeholders, the outcome of which will be documented in a report to NHS Highland, following 6 months of beneficial occupation of the new facility.

6. Conclusion

6.1 Overview

Establishing safe, sustainable, and resilient maternity and neonatal services for Highland women and their families and contributing to a networked model of care with NHS Grampian will require revenue and capital investment.

This Standard Business Case sets out the process which has undertaken to develop the strategic priorities, the preferred clinical service solution, and scope the facilities required to enable the service solution.

The investment proposed within this standard business case will enable person-centred care in line with Best Start recommendations and clinical guidelines and will aide in meeting the individualised care needs of the Highland women and their families and Moray women who choose to deliver in Inverness. This will lead to better experiences for patients and the staff delivering care which supports the ongoing strategically led lived experience and colleague experience improvement work.

Delivery of the refurbishment, AMU construction, workforce recruitment and strategic improvements will enhance future service sustainability for maternity and neonatal services in Highland while offering significant additional opportunities relating to quality and performance improvement within acute and community settings of maternity and neonatal care delivery.

The areas of investment as proposed in this Standard Business Case will help provide an equitable and high-quality maternity service that is concordant to Best Start recommendations and supports the Highland population and workforce to deliver the improvements required to contribute to an integrated model of care with NHS Grampian.

The proposed capital and revenue investments offer the potential for significant continuous quality improvement opportunities which may lead to revenue and non-pay savings due to less reliance on supplementary staffing to cover gaps, taking a value-based approach in meeting the needs of the Highland population and contributing to a networked model of care with NHS Grampian, and maximising resources currently in place to deliver the best possible care to women and their families.

On conclusion of this Standard Business Case, it is clear that this proposal is still important. The proposal will achieve NHS Scotland's Strategic Priorities (refer to table below) and will also deliver service change which responds to the national and local strategies as detailed throughout this proposal.

Table 6.1: NHS Scotland Strategic Priorities

NHS Scotland's Strategic Priorities:	**NHS Highland Maternity & Neonatal Services Standard Business Case**
Person Centred:	Enable person-centred care in line with Best Start recommendations and clinical guidelines
Safe	Provision of care which meets the requirements set out in the Needs Assessment, and Best Start.
Effective quality of care	Removal of variation will provide safe, effective care in an enhanced facility.
Health of population	Access to specialist healthcare services for patients throughout Highland. population, with additional benefits from partner organisations focused on healthcare research and

	innovation.
Value & sustainability	This investment will enable a sustainable, efficient patient focused service, which meets the standards of care set out in the Health Needs Assessment and the Ockenden Report and will enable the implementation of Networked Enabled Care with NHS Grampian.

6.2 Next Steps

This standard business case will be submitted to Scottish Government for approval of the required funding as part of ensuring the safe, equitable, measured, and methodical establishment of maternity and neonatal care pathways for Highland women and their families and to contribute to a networked model of care with NHS Grampian.

Once funding is secured, the Maternity and Neonatal Programme can:

- Begin to monitor progress against a recruitment strategy that is supported through a workforce plan that also encompasses organisational development, listening and engagement.

- Continue to consult with Raigmore Hospital-based staff on planning and associated timescales entailed as part of the refurbishment works due to take place in the maternity and neonatal units.

- Continue to engage and work in partnership with NHS Grampian clinical leadership in agreeing to develop and align maternity and neonatal care pathways to enable Highland to provide support to Moray women and their families once the required staffing establishment is in place.

- Monitor progress against key performance, quality, recruitment, and refurbishment milestones whilst continuing to escalate and mitigate risk through the appropriate actions.

- Continue to progress statutory approvals, design and construction proposals for the construction and refurbishment of the maternity and neonatal facilities.

7. Appendices

A. Highland Pregnancy and Birth Health Needs Assessment – February 2023

B. Risk Register

C. Decant Plan

D. Refurbishment Plans

E. Performance Dashboard – April 2023

F. Benefits realisation plan

G. Joint Programme Board SBAR

H. Equality Impact Assessment (EQIA)

I. Moray Maternity Services (Model 6) Draft Plan

J. AMU Shift Rota

K. Medical Shift Rota – Paediatrics

L. Medical Shift Rota – Obstetrics & Gynaecology

Highland Pregnancy and Birth Health Needs Assessment

February 2023

Public Health Intelligence

The Public Health Intelligence team are part of the Directorate of Public Health of NHS Highland and provide an expert resource on epidemiology, demography and population health evidence.

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If you require this document in an alternative format, such as large print or on a coloured background, please contact us to discuss your needs.

Version	Issued	Summary of changes
1	21.02.2023	First version of document
2		
3		

Distribution	Method
Head of Operations, Women and Child Health Directorate, Director of Public Health, Public Health Directorate, Public Health Intelligence intranet pages	Intranet with email link

Contents

Introduction

This report aims to provide an overview of the population health needs and issues concerning pregnancy and birth in Highland. It forms part of a larger programme of work looking at population health needs for babies, children and young people undertaken in spring 2023.

A health needs assessment (HNA) is used to assess a population's unmet health and healthcare needs to support planning and commissioning services. The definition used by the National Institute for Health and Care Excellence (NICE) is[1]:

> A systematic process used by NHS organisations and local authorities to assess the health problems facing a population. This includes determining whether certain groups appear more prone to illness than others and pinpointing any inequalities in terms of service provision. It results in an agreed list of priorities to improve healthcare in a particular area.

This report has been completed as a rapid 'desk-based' HNA, drawing together information gathered from local and national sources. It utilises epidemiological and comparative approaches to explore trends and inequalities in health outcomes for mothers and babies.

A rapid report of this type cannot provide a complete picture of population health needs in relation to pregnancy and birth. Instead, it gives an overview of key points to help understand the population's needs and contribute to the planning and improvement of services.

Main points

- The population of women of childbearing age in Highland decreased by four percent between 2011 and 2021. Population projections suggest a continued reduction in the population of childbearing age.
- Teenage pregnancies have fallen markedly, but there is room for further improvement in this long-standing national priority.
- There is variation in booking for antenatal care by population groups likely to have higher needs, notably women under the age of 20, women over the age of 40 and women living in the most deprived quintile of deprivation.
- Recording and reporting complex social factors and vulnerabilities in the maternity record are essential. Data capture about vulnerable women should continue to be improved.
- There have been decreasing numbers of births in Highland, and the immediate impact of the COVID-19 pandemic did not modify recent birth trends. This pattern of decreasing birth numbers is expected to continue.

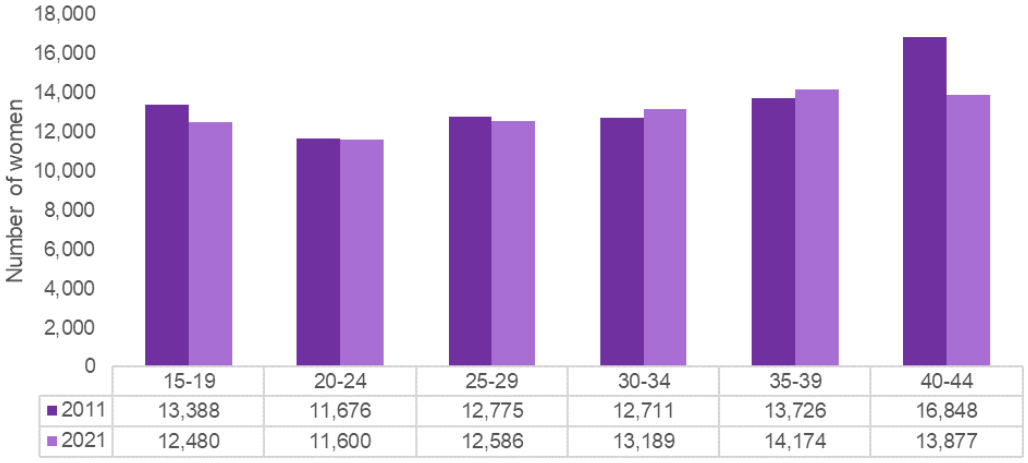
- Reducing stillbirths and infant mortality should continue to be a priority for action.
- Patterns of preterm births and low birth weight are associated with complex social factors, deprivation and maternal risks. Attention should be given to preventative actions to reduce risks.
- There is strong evidence that breastfeeding is one of the most preventative health measures for children and mothers, with short-term and long-term benefits. Actions to improve breastfeeding uptake should be prioritised.
- A programme of improvements focused on BadgerNet should be undertaken to ensure the reporting of pregnancy and newborn screening indicators.
- Women with complex health needs include women who smoke, women who are obese and women who use alcohol and drugs during pre-conception and pregnancy. These factors are linked to deprivation and social inequalities. Opportunities for preventative work should be strengthened.
- Preventative activity in pre-conception, pregnancy and early years should be strengthened, and prevention explicitly considered as a part of service and pathway design or redesign.

Population

Females aged 15-44

There are 78,000 women aged 15-44 years living in Highland. Figure 1 shows that the age distribution is relatively evenly spread across the population aged 15-44 in 2021.

Figure 1: Number of women aged 15-44 years living in Highland in 2011 and 2021

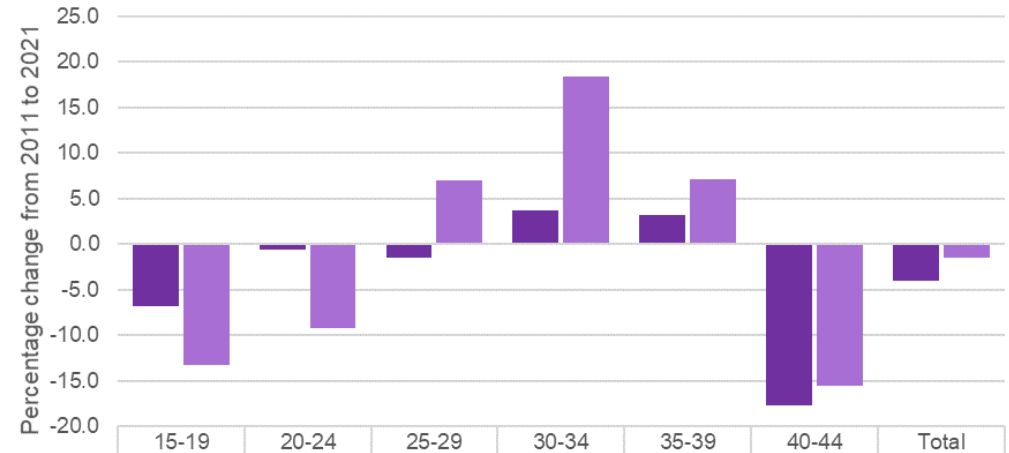


	15-19	20-24	25-29	30-34	35-39	40-44
2011	13,388	11,676	12,775	12,711	13,726	16,848
2021	12,480	11,600	12,586	13,189	14,174	13,877

Source: National Records of Scotland Population Estimates

The number of women of childbearing age in the area decreased by four percent between 2011 and 2021, with more significant reductions in the 15-19 year and 40-44 year age groups (Figure 2).

Figure 2: Percentage change in the number of women aged 15-44 years living in Highland and Scotland in 2011 and 2021



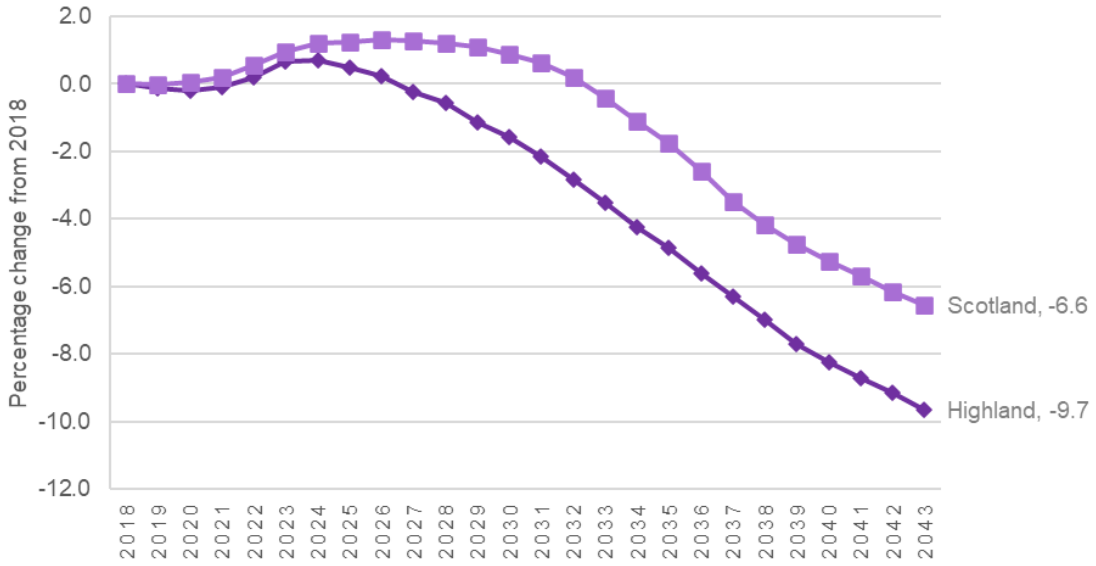
	15-19	20-24	25-29	30-34	35-39	40-44	Total
Highland	-6.8	-0.7	-1.5	3.8	3.3	-17.6	-4.0
Scotland	-13.2	-9.2	7.0	18.4	7.1	-15.5	-1.4

Source: National Records of Scotland Population Estimates

Population projections

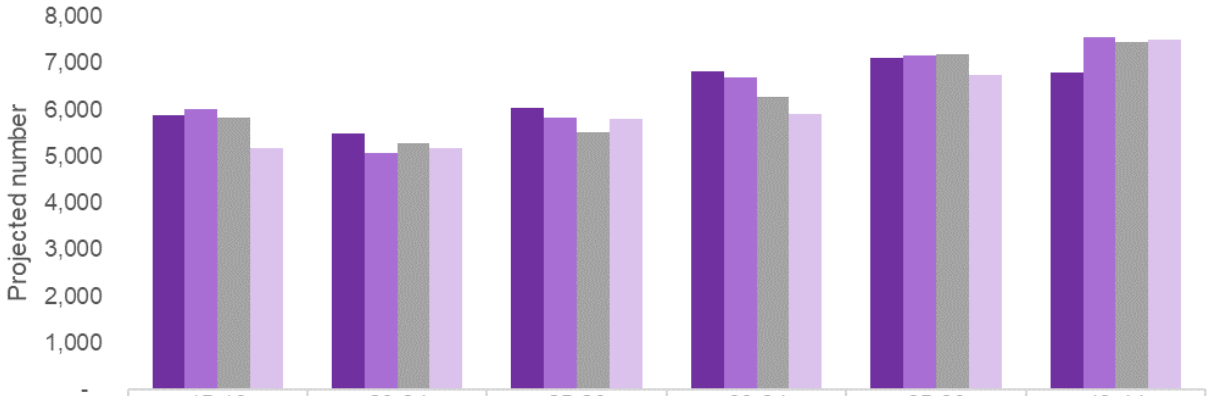
Population projections suggest a continued reduction in the population of childbearing age (Figure 3), with increasing proportions of the cohort made up of older women over time (Figure 4).

Figure 3: Projected change in the number of women aged 15-44 living in Highland and Scotland



Source: National Records of Scotland Population Projections (2018 based)

Figure 4: Projected number of women aged 15-44 living in Highland



	15-19	20-24	25-29	30-34	35-39	40-44
2018	5,896	5,484	6,040	6,825	7,121	6,810
2025	6,017	5,070	5,840	6,702	7,172	7,565
2030	5,827	5,288	5,506	6,287	7,203	7,460
2035	5,169	5,190	5,804	5,916	6,756	7,493

Source: National Records of Scotland Population Projections (2018 based)

Pre-conception and Conception

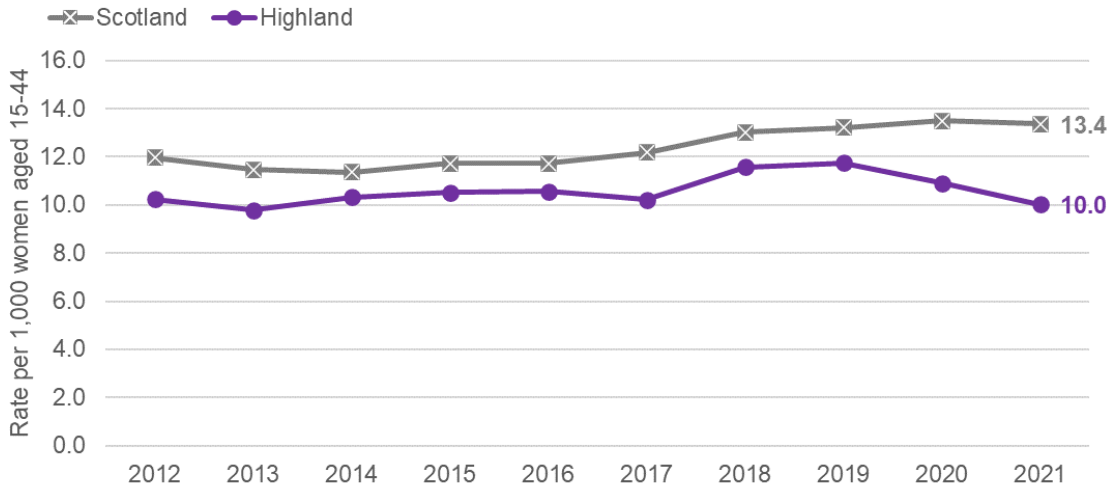
Terminations

The rate of terminations of pregnancy in Highland in 2021 was 10.0 per 1,000 women aged 15 to 44 compared to 13.4 in Scotland (Figure 5).

The number of terminations undertaken in 2021 was 379, a slight reduction from the 448 undertaken in 2019.

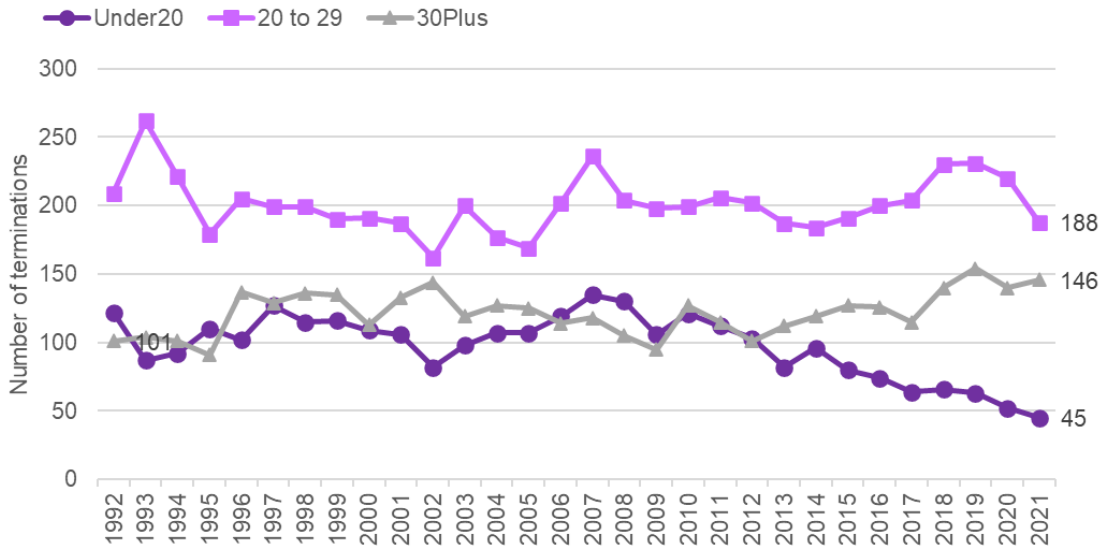
As an essential service, care relating to the termination of pregnancy was provided throughout the COVID-19 pandemic. The number of pregnancy terminations has declined in women under 20 (Figure 6).

Figure 5: Termination of pregnancy, rate per 1,000 women aged 15 to 44 years, 2012-2021



Source: Public Health Scotland Termination of Pregnancy Statistics Table 4

Figure 6: Number of terminations of pregnancy by age group in Highland, 1992–2021



Source: Public Health Scotland Termination of Pregnancy Statistics Table 5 and Open Data

Teenage Pregnancy

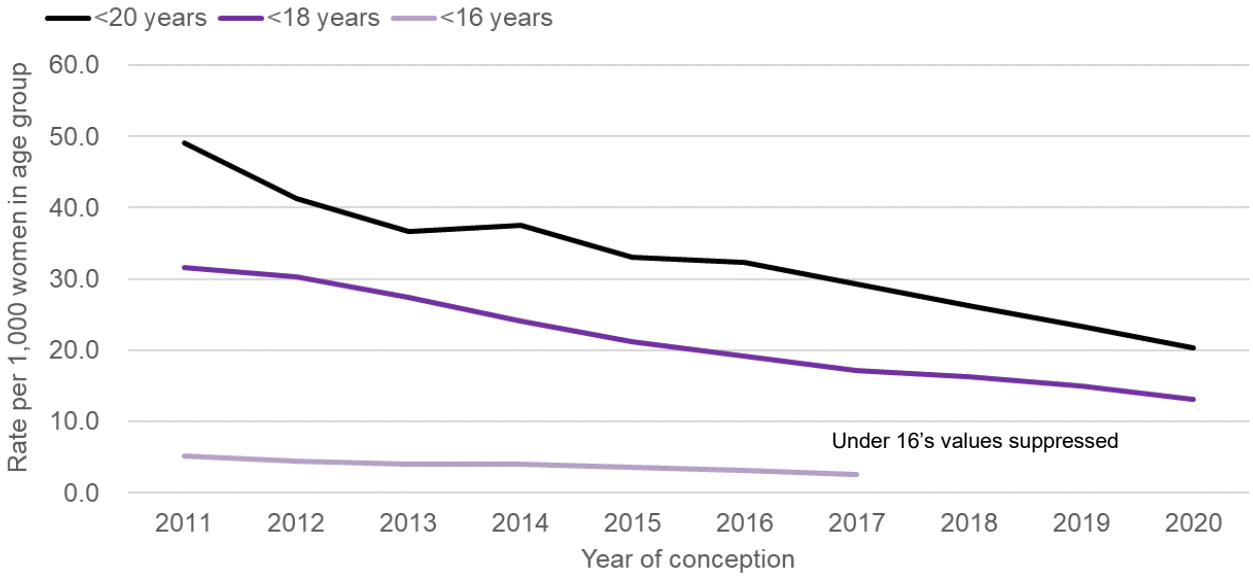
Many teenage women experience unintended or unwanted pregnancies, although this may be a planned, positive life choice for some women. Reducing unintended teenage pregnancy has been a long-standing priority for the Scottish Government.

Evidence from the Family Nurse Partnership in 2022 highlighted that younger mothers are more likely to live in deprived areas. This group has increased risks associated with deprivation and adverse outcomes in pregnancy, including higher smoking and preterm birth rates[2].

Since 2011 overall teenage pregnancy rates per 1,000 women in the under-20 age group have fallen almost 59% (from 49.1 in 2011 to 20.3 in 2020). In terms of the total number of teenage pregnancies, there were 319 in 2011 compared to 120 in 2020.

Due to small numbers, the number and rates of teenage pregnancy in the under-16 and under-18 age groups have been aggregated into three-year periods. They show similar rates of decline (Figure 7).

Figure 7: Teenage pregnancy by age group at conception, Highland, 2011-2020[1,2]



Source: NRS birth registrations & Notifications of abortions performed under the Abortion (Scotland) Regulations 1991. Public Health Scotland.
[1] Rates of pregnancies in women aged under 16 years and 18 years are for 3 year periods. Rates are calculated using the female population aged 13-15, 15-17 and 15-19.
[2] The under 16's values have been suppressed due to the potential risk of disclosure from 2016-2018

Antenatal period

Antenatal booking

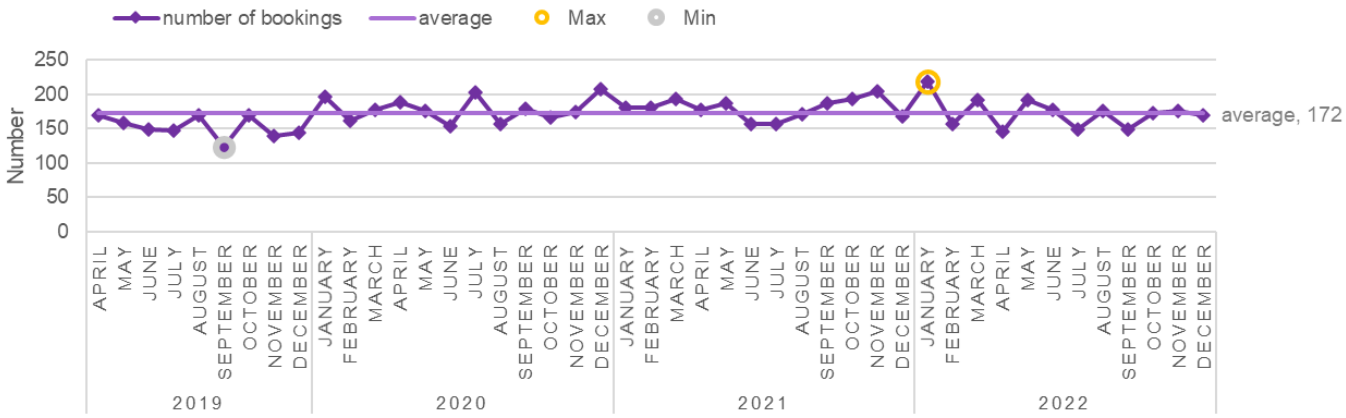
Early access to high-quality antenatal care improves long-term health outcomes for mothers, babies and families. The booking appointment is the midwife's first contact with a pregnant woman to assess her needs and to arrange an early pregnancy scan and antenatal screening.

Women at the most significant risk of poor health outcomes are the least likely to access and benefit from antenatal healthcare.

There were 2,070 pregnancies booked for maternity care by Highland residents in 2022, an average of 173 a month. The maximum number of bookings in a month during the period shown in Figure 8 occurred in January 2022 (218).

Understanding variations in booking numbers and changes in the demography of the women booking are essential for planning antenatal services and services for those of reproductive age. The order of this variation will be larger in areas with smaller populations booking for maternity care across Highland.

Figure 8: Number of Highland pregnancies booked for antenatal care by month[1]



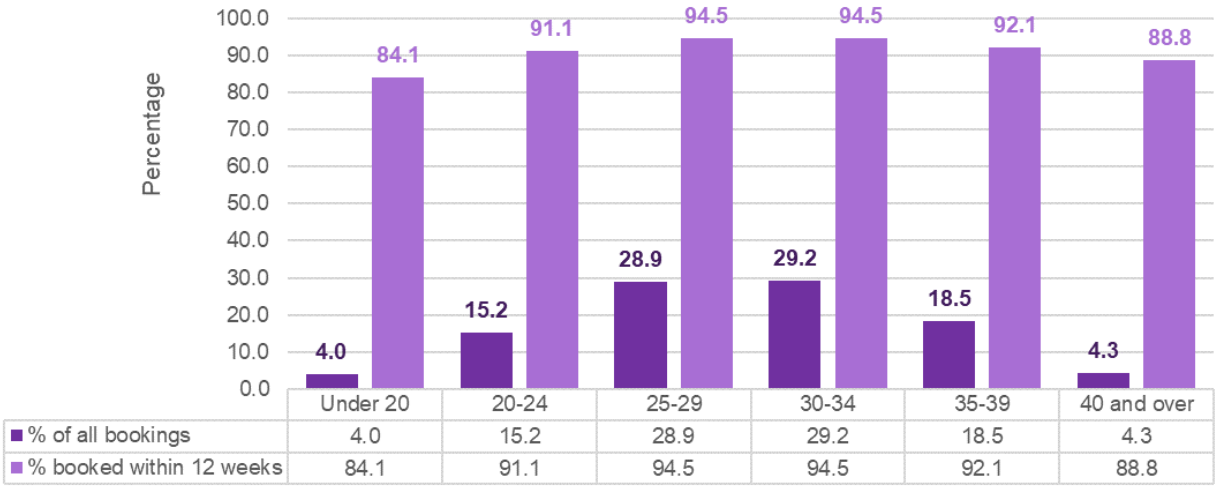
Source: Public Health Scotland Antenatal Booking Collection (ABC)
[1] Some women may have more than one pregnancy during 12 months.

In 2022 over 50 percent of pregnancies booked were in women aged 30 and older. Fewer than one in five pregnancies booked were in women aged under 25 (Figure 9). These patterns are consistent with trends in the age of women giving birth discussed on page 12.

Having a baby at an older maternal age is associated with increased risks for the mother and child, including having a caesarean section, congenital conditions and admission to a neonatal unit[3].

For service planning, the increase in maternal age suggests an increased workload as older mothers are at greater risk of complications and surgical interventions during pregnancy and childbirth.

Figure 9: Percentage of women booked by age and percentage of bookings by 12 weeks of gestation in Highland in 2022



	Under 20	20-24	25-29	30-34	35-39	40 and over
% of all bookings	4.0	15.2	28.9	29.2	18.5	4.3
% booked within 12 weeks	84.1	91.1	94.5	94.5	92.1	88.8

Source: Public Health Scotland Antenatal Booking Collection (ABC)

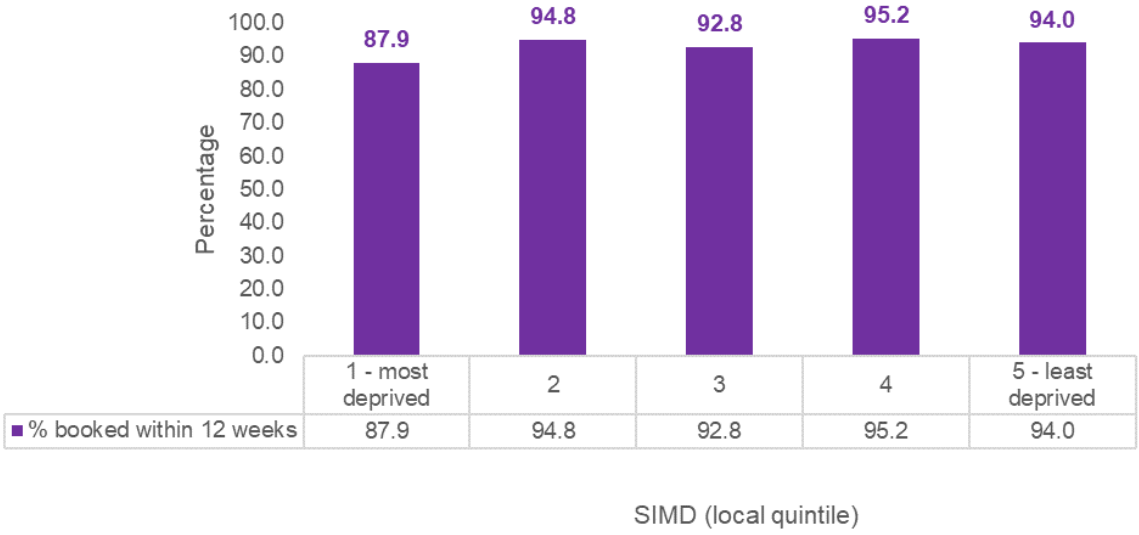
Women are encouraged to book before they are 13 weeks pregnant and, ideally, before ten weeks. The NICE guideline on antenatal care recommends that the booking appointment should ideally occur within ten weeks[4].

In 2022, 93 percent of pregnancies in Highland were booked by 12 weeks of gestation. The pregnancies of women under 20 years and over 40 years were less likely to be booked by 12 weeks compared to other women (Figure 9).

Early access to antenatal services is a current Scottish Government Local Delivery Plan (LDP) LDP standard[5]. The standard states that at least 80% of pregnant women in each deprivation quintile of the Scottish Index of Multiple Deprivation (SIMD) will be booked for antenatal care by the 12th week of gestation.

In Highland in 2022, pregnant women from more deprived areas were less likely to be booked within 12 weeks than pregnant women living in areas in the least deprived quintile (Figure 10).

Figure 10: Percentage of Highland pregnancies booked within 12 weeks by SIMD in 2022



Source: Public Health Scotland Antenatal Booking Collection (ABC)

Antenatal care with complex social factors

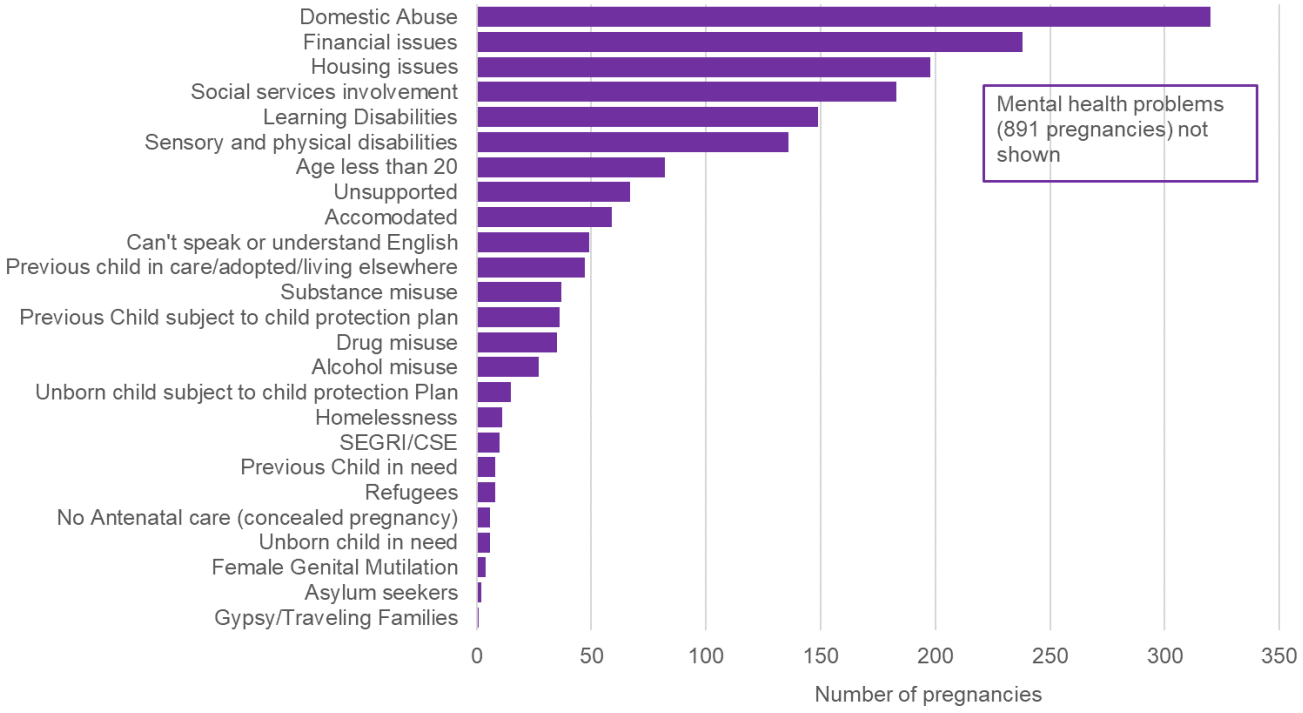
Pregnant women presenting for antenatal care with a complex social factor or vulnerability are most at risk of poor pregnancy outcomes[6]. Complex social factors in pregnancy include poverty; homelessness; substance misuse; recent arrival as a migrant; asylum seeker or refugee status; difficulty speaking or understanding English; age under 20; domestic abuse. Screening during pregnancy will determine local needs and how these might be met.

In 2022, around 60 percent (1,250) of the pregnancies booked in Highland had at least one complex social factor or vulnerability reported on the BadgerNet maternity record. In 71 percent of pregnancies with a vulnerability recorded, the most common issue was a mental health problem. Mental health includes a family history of mental health problems, a previous mental health history and a current concern within the pregnancy.

The next most common concerns recorded in 2022 were domestic abuse, financial issues, housing and accommodation issues, social services involvement, disabilities, language difficulties and problematic substance use.

Recording complex and multiple social factors and vulnerabilities are essential for service planning. The vulnerability criteria in the Badgernet vulnerability report are changing to include pregnancies with the criminal justice system or prison involvement.

Figure 11: Antenatal bookings with a vulnerability reported during pregnancy, 2022



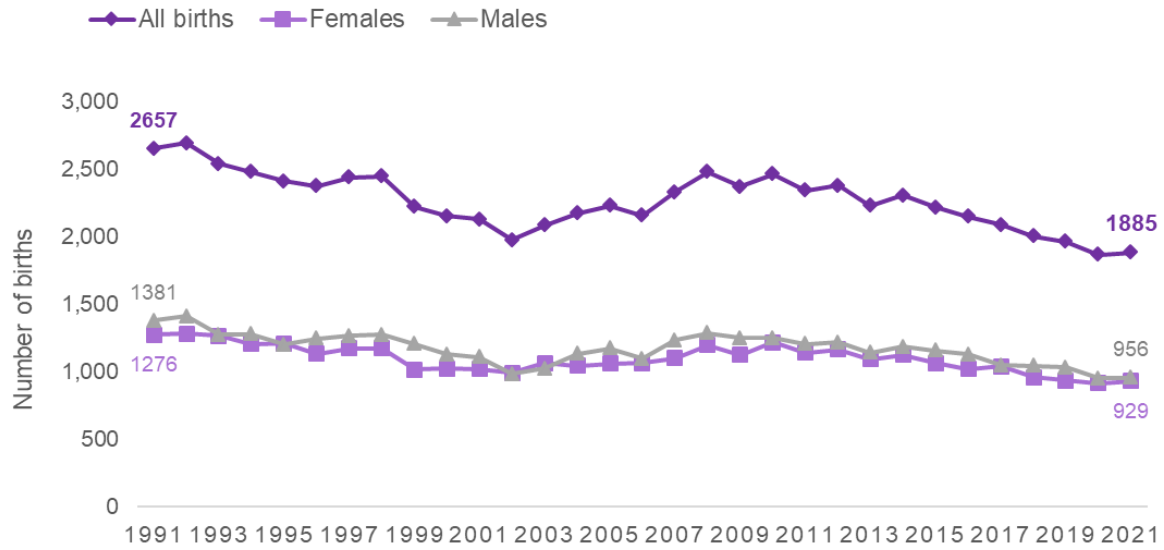
Source: Badgernet Maternity
Mental health problems are not shown to help with the reading of other categories

Births

Number of births and fertility rate

There were 1,885 live births registered to Highland residents in 2021, slightly more than in 2020 (Figure 12). The number of children born nationally and locally in recent years is historically low.

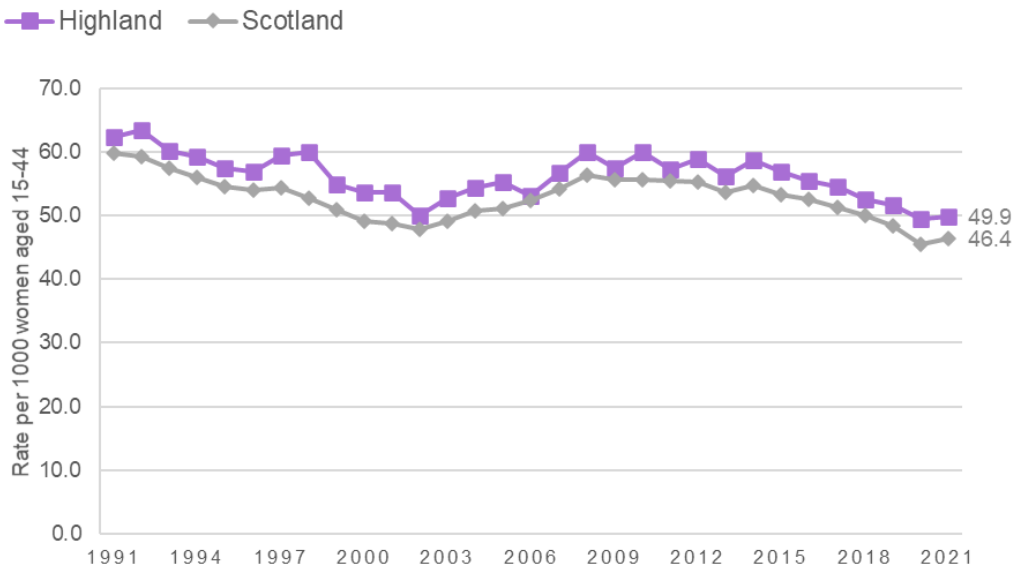
Figure 12: Annual number of live births in Highland by sex, 1991-2021



Source: National Record of Scotland Births (Time Series)

Annual birth rates in Highland are consistently higher than Scotland's but closely follow the national pattern, with the current decline starting from 2008 (Figure 13).

Figure 13: General Fertility Rate, total live births per 1,000 women aged 15 to 44 years



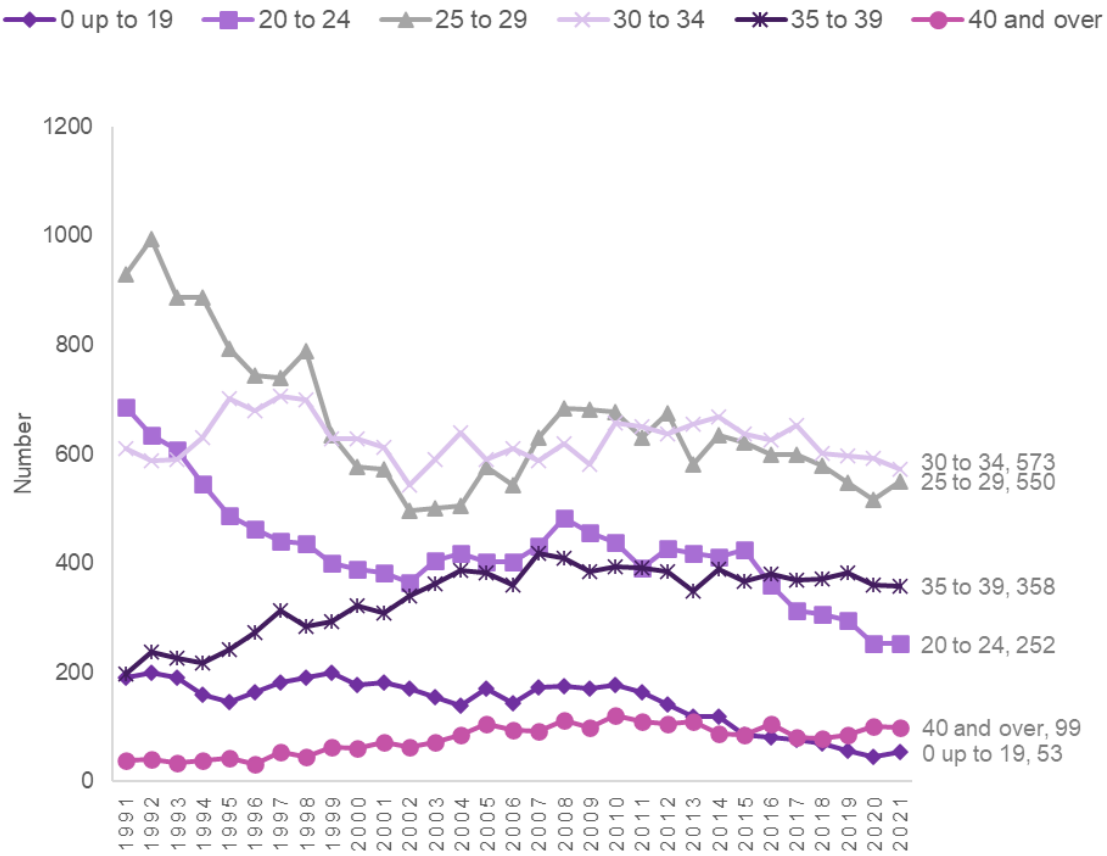
Source: National Record of Scotland Births (Time Series)

Births by the age of the mother

The decline in the number of births in the 1990s resulted primarily from women in their twenties postponing having children. From 2001 until 2008, the rise in the number of births resulted from an increase in women in their twenties having children, coupled with an increase among women in their 30s and 40s who had perhaps postponed starting a family (Figure 14).

However, since 2008 there has been a decline in the number of births, possibly explained by women leaving motherhood until later in life, women having fewer children and periods of economic uncertainty. The beginning of the recent fall coincided with the banking crisis and financial crash.

Figure 14: Births to Highland residents by mother's age, 1991-2021



Source: National Record of Scotland Births (Time Series)

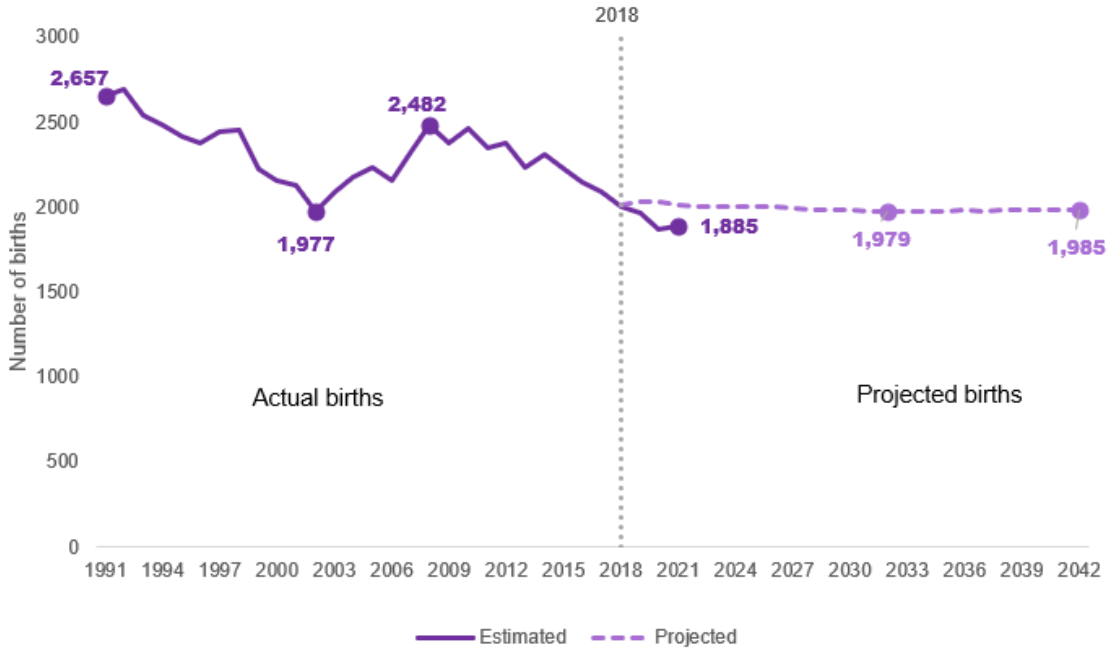
Currently, around 100 women aged 40 or older who are residents of Highland give birth each year. According to the Royal College of Midwives, older women are likely to require increased resources. Older women are more at risk of pre-eclampsia, miscarriage and complicated pregnancies that could result in forceps or caesarean section for delivery[7].

More recently, the immediate impact of the COVID-19 pandemic did not modify recent birth trends (Figure 7, 8, 13 and 14).

Projected number of births in Highland

In Highland, the annual number of births per year was projected to remain between 1,970 and 2,000. However, the actual number of births has further reduced in recent years. The current projection may be overly optimistic. There has been a fall in inward migration in the key years of family formation following Brexit, and the trend of mothers waiting until they are older before having families continues.

Figure 15: Actual and projected number of births in Highland, 1991 to 2042



Source: National Record of Scotland Births Time Series, Population Projections for Scottish Areas (2018-based)

Country of birth of parents

In 2021, 14 percent of women giving birth who were residents of Highland were born outside the United Kingdom. Births to mothers born in the European Union account for around one in ten births annually (Figure 16).

Figure 16: Live births by country of birth of mothers resident in Highland and Scotland in 2021

Area	All countries of birth	United Kingdom, Isle of Man, Channel Islands	Irish Republic including Ireland, part not stated	Other European Union	Commonwealth						Other countries	Not stated
					Total	Australia, Canada, New Zealand	India, Bangla-desh, Sri Lanka, Pakistan	West Indies, Belize, Guyana	Africa	Other Common-wealth		
Number												
Scotland	47,786	39,529	276	3,370	2,418	258	1,308	21	763	68	2,096	97
Highland	**1,885**	**1,615**	**12**	**172**	**40**	**6**	**21**	**1**	**11**	**1**	**46**	
Percentage												
Scotland		82.7	0.6	7.1	5.1	0.5	2.7	0.0	1.6	0.1	4.4	0.2
Highland		**85.7**	**0.6**	**9.1**	**2.1**	**0.3**	**1.1**	**0.1**	**0.6**	**0.1**	**2.4**	**0.0**

Source: National Record of Scotland Births Vital Events reference table 3.09, 2021

Stillbirths

A stillbirth is a baby born after 24 or more weeks completed gestation and who did not, at any time, breathe or show signs of life. They can occur before childbirth as well as after the onset of labour.

While a tragic event for all, thankfully, stillbirths are rare, occurring in about 1 in 265 births in Scotland. Stillbirth rates have decreased, but the national improvement has plateaued from around 2015. The evidence before the pandemic shows that there are socio-economic inequalities in relation to stillbirths in Scotland that account for some of the stalling of improvement in rates[8]. Stillbirths have many causes, but no reason is found for some.

Although not all stillbirths can be prevented, the risks can be reduced by not smoking and avoiding alcohol and drugs during pregnancy. Maternal obesity also increases the risk of stillbirth, and advanced maternal age is an increasingly prevalent risk factor. Attending all antenatal appointments and self-monitoring of the baby's movements also reduce the risk[9].

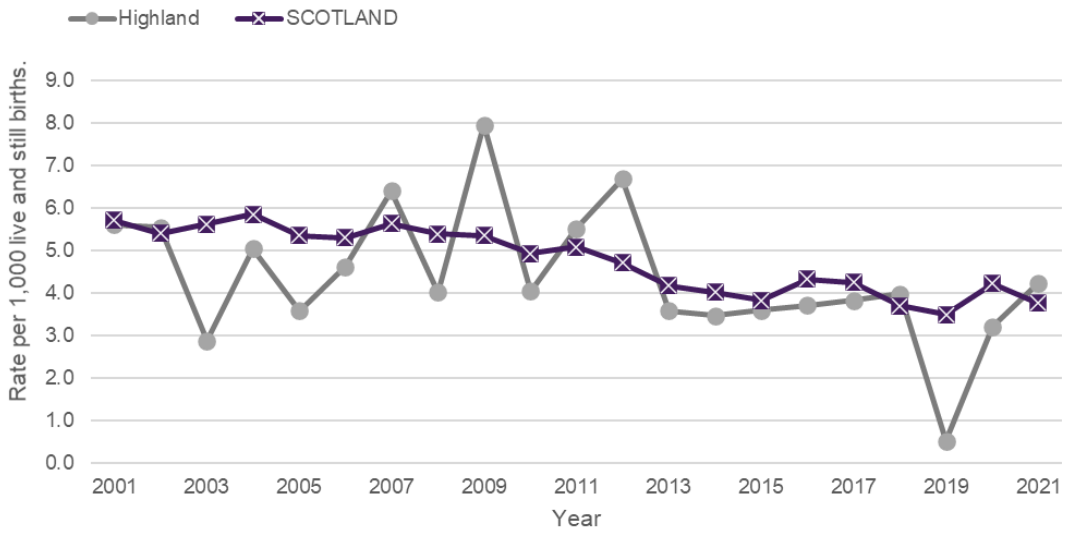
Stillbirth numbers in Highland are subject to large percentage fluctuations annually due to the inevitable variability of natural events (Figure 17, Figure 18**Error! Reference source not found.**).

Figure 17: Annual number and stillbirth rate in Highland

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Number	12	11	6	11	8	10	15	10	19	10	13	16	8	8	8	8	8	8	1	6	8
Rate per 1000 live and stillbirths	5.6	5.5	2.9	5.0	3.6	4.6	6.4	4.0	7.9	4.0	5.5	6.7	3.6	3.5	3.6	3.7	3.8	4.0	0.5	3.2	4.2

Source: National Record of Scotland Vital Events, Table 1.3

Figure 18: Annual stillbirth rate per 1,000 live and stillbirths in Highland and Scotland



Source: National Record of Scotland Vital Events, Table 1.3

The evidence suggests no stillbirth increase following the COVID-19 pandemic in Scotland and Highland. However, there were changes to service access and support during and from this period. It is impossible to know what would have happened to stillbirth rates without the pandemic.

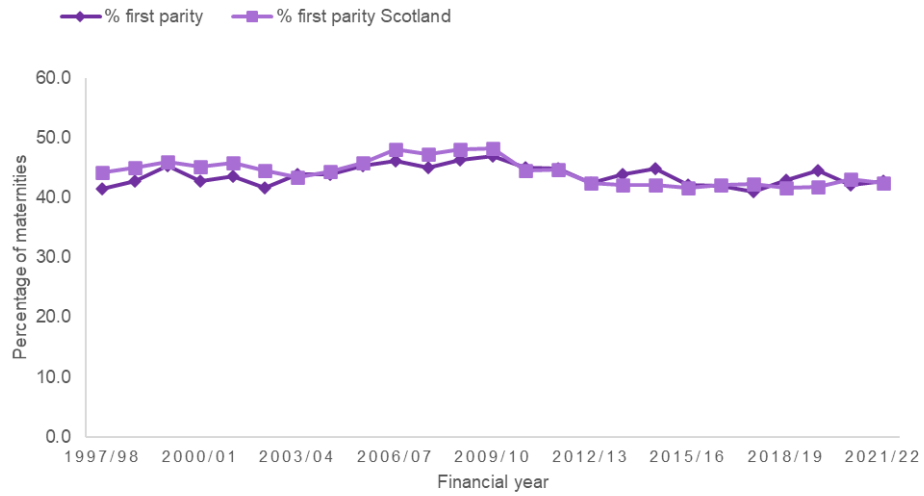
Births in Highland

This section is based on information collected at the time of delivery in the Scottish Morbidity Record 02 (SMR02) maternity data scheme.

First Parity

Parity and obstetric history are critical determinants of the risk of a complicated birth in women who labour at term[10]. In Highland and Scotland, around 45 percent of births are to first-time mothers. This pattern has been consistent over time (Figure 19).

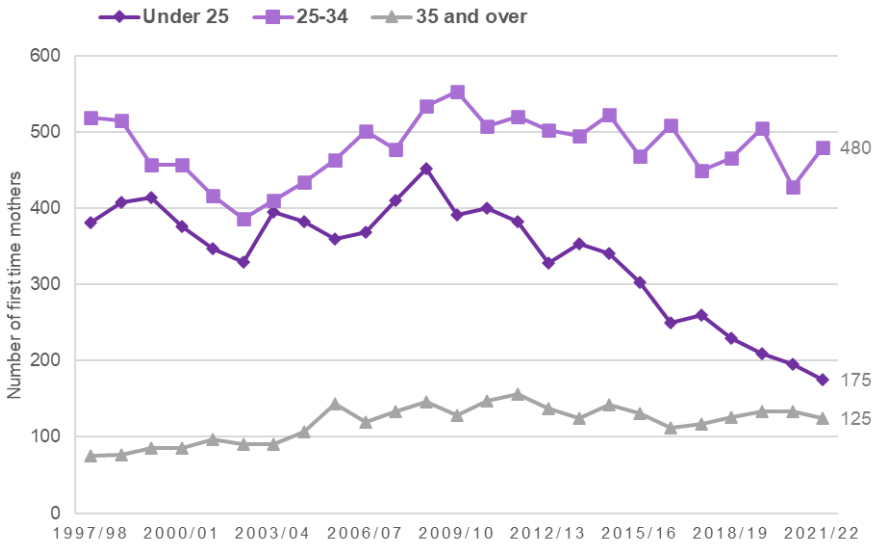
Figure 19: Percentage of first-time mothers in Highland and Scotland, 1997/98 to 2021/22



Source: Public Health Scotland (SMR02) Open Data

The number of first births to women aged over 35 years of age has been increasing (Figure 20).

Figure 20: Number of births to first-time mothers in Highland by age group



Source: Public Health Scotland (SMR02) Open Data

Gestation

Gestation refers to the number of weeks pregnant a woman is when she delivers her baby.

Babies are 'due' at 40 weeks gestation.

Those born between 37 and 41 weeks are referred to as born 'at term'.

Babies born at less than 37 weeks are considered preterm or premature.

Babies born at 42 weeks or over are considered post-term or over-due.

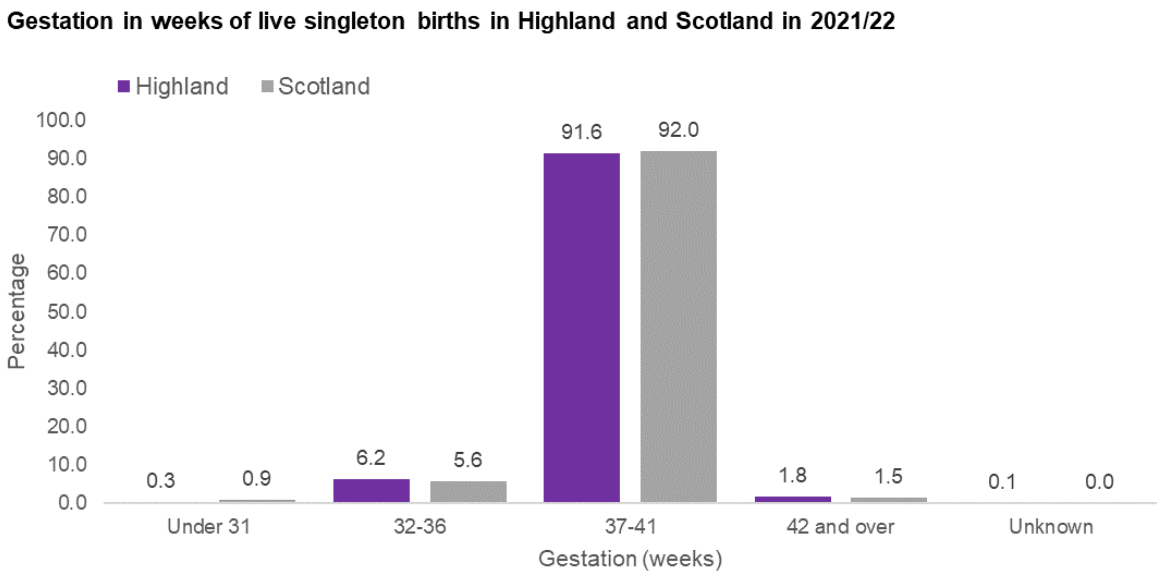
Gestation at delivery strongly influences the health of babies. Babies born preterm can have multiple difficulties in the days and weeks following their birth. The consequences of being born too early can continue to affect health and development throughout childhood and adult life[11].

Known risks for preterm delivery[6]

- Maternal poverty, deprivation and stress.
- Low or high maternal age or BMI.
- Maternal smoking, alcohol or drug misuse.
- Previous preterm deliveries.
- Multiple pregnancy (twins or more).
- Maternal health issues or infections arising during the pregnancy.

In Scotland, being born too soon is the principal reason babies require admission to neonatal care and the single most significant cause of death in early infancy[11].

Figure 21: Gestation in weeks of live singleton births in Highland and Scotland in 2021/22

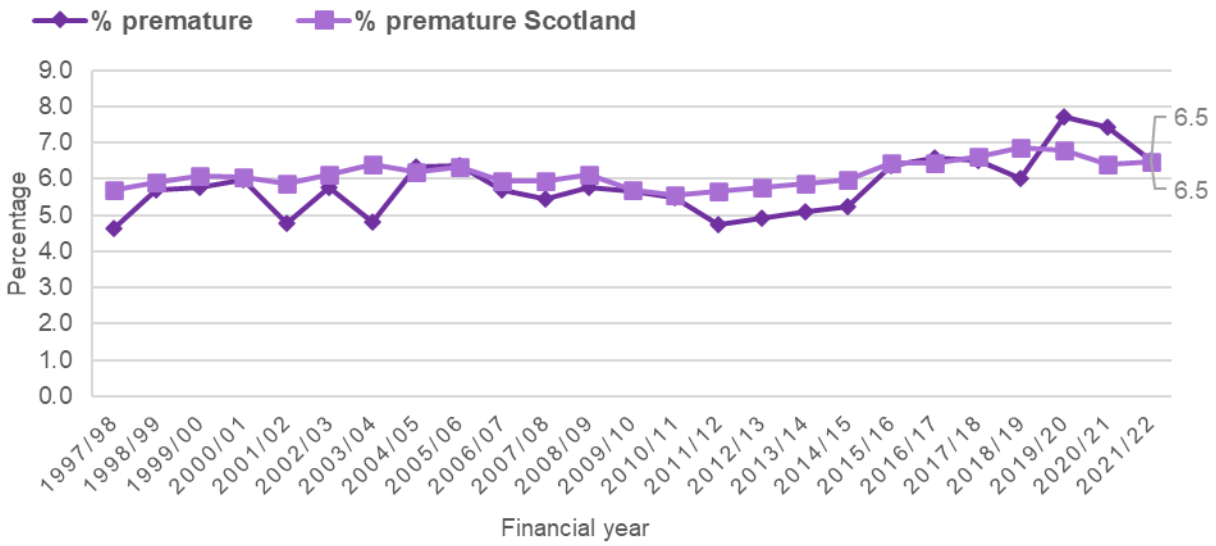


Source: Public Health Scotland (SMR02) Open Data

In Highland and Scotland in 2021/22, 6.5 percent of live singleton babies were born prematurely (Figure 22). Babies from multiple pregnancies are much more likely to be born

prematurely. Instances of multiple pregnancies are relatively low and vary in Highland from year to year. Highland and Scotland's preterm singleton birth rate has generally increased.

Figure 22: Percentage of premature births (under 37 weeks of gestation) in Highland and Scotland

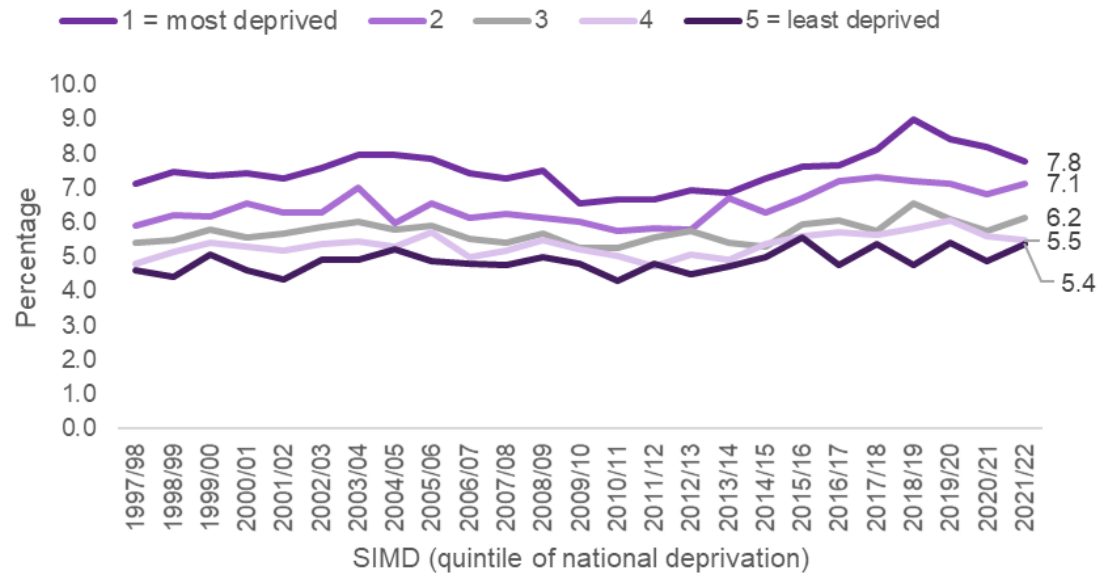


Source: Public Health Scotland (SMR02) Open Data

Preterm birth rates are generally higher in younger and older women. In Highland in 2021/22, 9.5 percent of births to women under 25 were premature. In women over 35 years, this was 7.2 percent, and in women aged 25-34, 5.4 percent.

Rates of prematurity are consistently higher in women living in deprived areas (Figure 23).

Figure 23: Percentage of premature births (under 37 weeks gestation) by SIMD in Highland



Source: Public Health Scotland (SMR02) Open Data

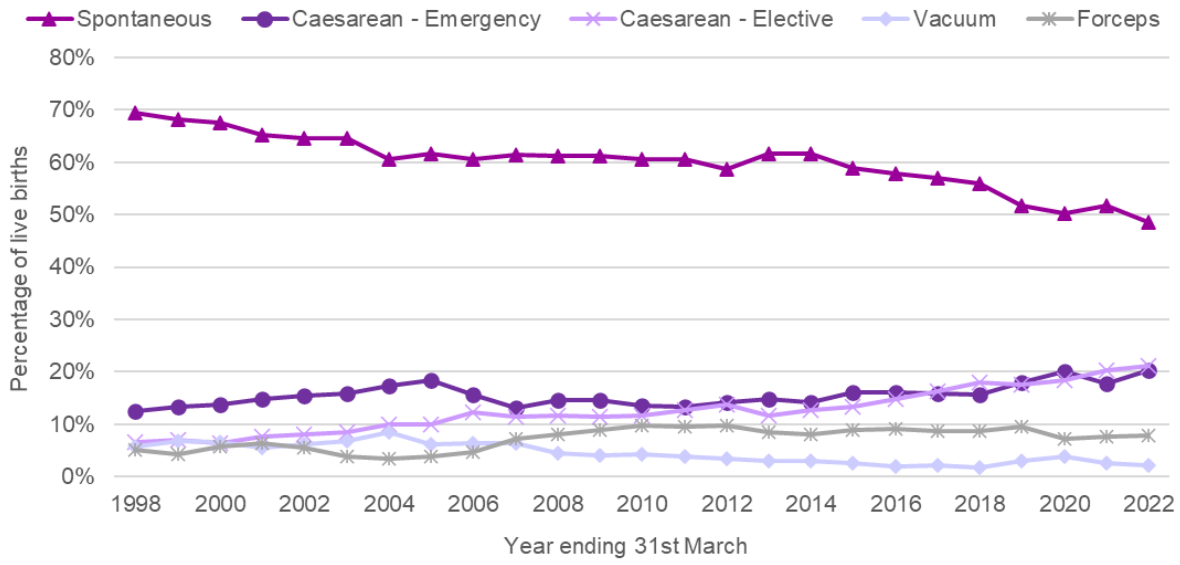
Public Health Scotland[6] summarises the actions to reduce harm from premature births as including:

- Reducing spontaneous pre-term birth through population wide actions such as reducing smoking, promoting maternal healthy weight, and minimising the risk of multiple pregnancy associated with assisted reproduction techniques such as IVF.
- Reducing spontaneous pre-term birth through additional antenatal care for women at high risk.
- Reducing non-spontaneous pre-term birth to the lowest safe level.
- Ensuring that women who are going to deliver preterm receive treatment shown to protect the health of their baby after birth.
- Ensuring that babies born pre-term receive high quality neonatal care.

Method of delivery

The method of delivery shows a pattern of increasing proportions of caesarean deliveries and reducing proportions of spontaneous vaginal deliveries (Figure 24). There are increases in both elective caesarean and emergency caesarean deliveries over time. The overall pattern of delivery methods in Highland is similar to Scotland. More detailed analyses would be required to understand trends and variations in the type of delivery.

Figure 24: Live singleton births by method of delivery in Highland, 1998-2022



Source: Public Health Scotland (SMR02) Open Data

Baby birthweight

Birth weight is the first weight of the newborn measured immediately after birth, and a weight lower than 2500 grams is considered low birth weight (LBW). Babies weighing 2500 grams and 3999 grams at birth are considered to have a 'normal' birthweight, and birthweight of 4000 grams or more is considered larger than average or macrosomic.

Many factors that increase the risk of premature birth also increase the risk of growth retardation in the womb and LBW. Risk factors contributing to low birth weight can include a mother's young age, multiple pregnancies, previous LBW infants, poor nutrition, heart disease or hypertension, drug addiction, alcohol misuse, and insufficient prenatal care. Environmental risk factors include smoking, lead exposure, and other types of air pollution.

Compared to infants of normal weight, low birth weight infants may be more at risk for many health problems. Some babies may become sick in the first six days of life (perinatal morbidity) or develop infections. Other babies may even suffer from longer-term issues such as delayed motor and social development or learning disabilities.

Low birth weight is a headline indicator for monitoring health inequalities in Scotland[12].

Risk factors for high birth weight include maternal obesity, significant pregnancy weight gain, and maternal diabetes.

The primary complications of foetal macrosomia occur because of birth injuries and traumatic deliveries. There is a risk of obesity, metabolic complications and hypoglycemia at birth for the baby.

In 2021/22, 4.6 percent of live singleton babies born to Highland residents had low birth weights, and 13.6 percent of babies were macrosomic (Figure 25).

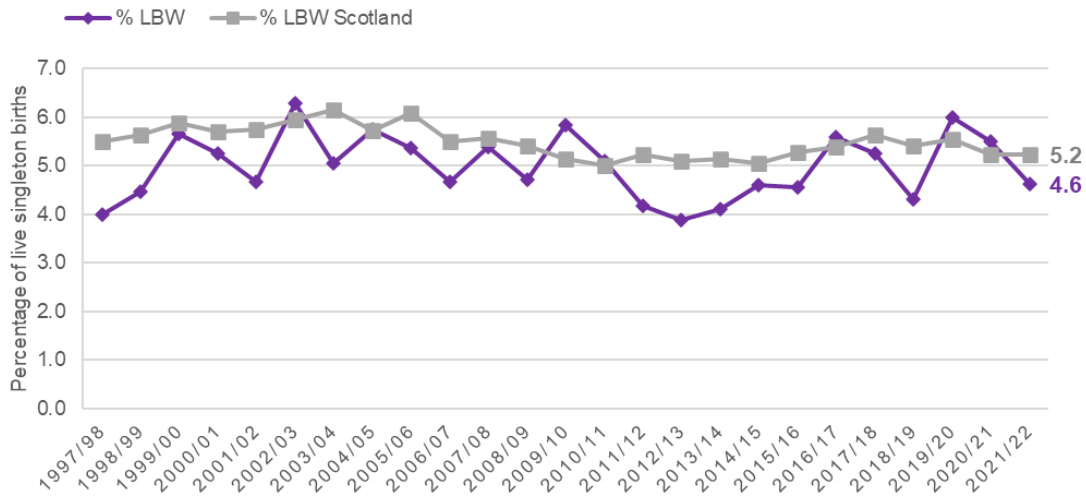
Figure 25: Birthweight of live singletons born to residents of Highland and Scotland in 2021/22

		<1500g	1500-2499g	2500-3999g	4000g+	Not Known	Total live singleton births
Highland	Number	4	79	1,472	244	0	1,799
	Percentage	0.2	4.4	81.8	13.6	0.0	100
Scotland	Number	373	2,036	37,652	5,919	23	46,003
	Percentage	0.8	4.4	81.8	12.9	0.0	100

Source: Public Health Scotland Births in Scotland 2022, Table 6.5

While the proportion of singleton babies born preterm has increased over time, the proportion of singleton LBW babies has been relatively consistent (Figure 26). An explanation is that babies born at any gestation have, on average, become slightly heavier over the same period[11].

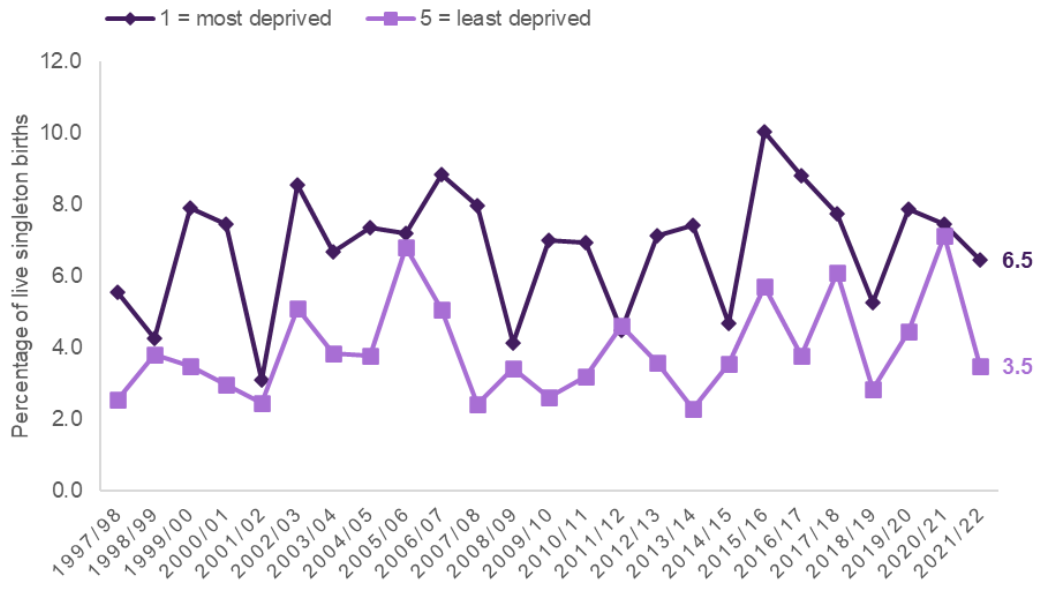
Figure 26: Live singleton births with low birth weight born to residents of Highland and Scotland



Source: Public Health Scotland (SMR02) Open Data

The relationship between low birthweight and deprivation is consistent over time in Highland, with higher proportions of singleton LBW babies born to mothers resident in the most deprived areas (Figure 27).

Figure 27: Live singleton births with low birth weight by deprivation in Highland



Source: Public Health Scotland (SMR02) Open Data

Postnatal period

Infant feeding

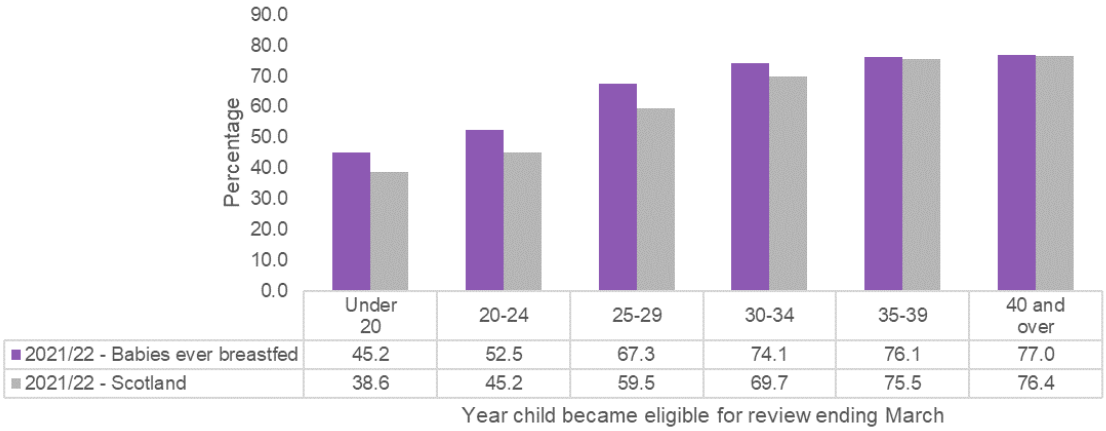
Breastfeeding is part of the natural reproductive process and an essential public health activity that should be encouraged. There is strong evidence of the short-term and lifelong health benefits of breastfeeding for both mothers and infants[13]. There is clear economic evidence that investing in improving breastfeeding practices are cost saving preventative actions[14]. The Scottish Government has adopted as policy World Health Organisation guidance recommending exclusive breastfeeding for the first six months of an infant's life. However, breastfeeding rates in Scotland remain low compared to those of comparable countries.

Breastfed infants have a lower risk of infection, particularly those affecting the ear, respiratory tract and gastrointestinal tract. Breastfeeding women have lower risks of breast cancer, epithelial ovarian cancer and hip fracture later in life[15]. There is increasing evidence that breastfeeding helps protect against becoming overweight or obese over the life course[16]. Infant feeding patterns are strongly determined by many demographic variables, including age, deprivation, and ethnicity and are known to be influenced by smoking behaviour.

Infant feeding data is available from Health Visitor reviews collected for child health surveillance. The source can be used to monitor the initiation, duration and exclusivity of breastfeeding. Infant feeding patterns are strongly determined by demographic variables, including age, deprivation, and ethnicity and are known to be influenced by smoking behaviour.

In Highland, 69 percent of babies born in 2021/22 started breastfeeding. Younger women are less likely to have begun breastfeeding by the time of the first Health Visitor review (Figure 28).

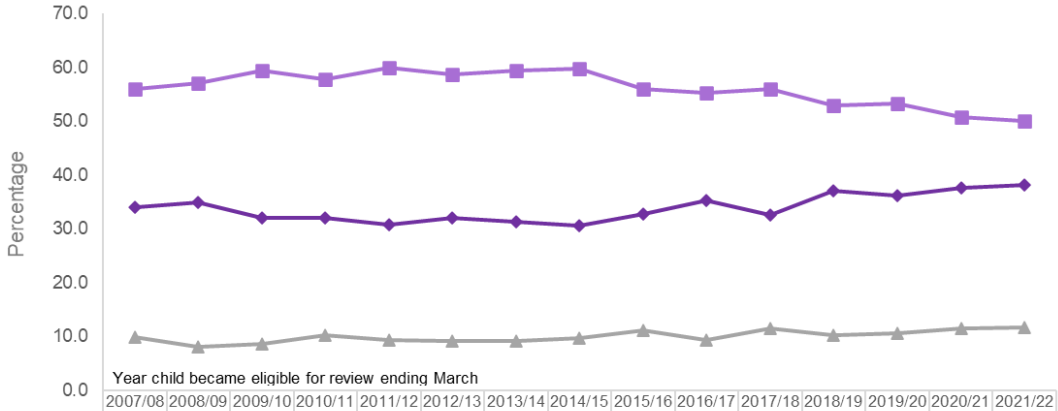
Figure 28: Breastfeeding initiation recorded at First Visit by maternal age in Highland and Scotland in 2021/22



Source: Public Health Scotland Infant Feeding Open Data

By 6-8 weeks of age, in 2021/22, 38 percent of babies were still exclusively breastfed, and 12 percent were mixed breast and formula fed (Figure 29). Adding exclusive breastfeeding and mixed feeding, half of Highland babies received breast milk at 6-8 weeks of review. The modest improvement in babies breastfed from 2014-15 primarily results from an increase in women in their twenties exclusively breastfeeding.

Figure 29: Infant feeding at health visitor 6-8 week review in Highland

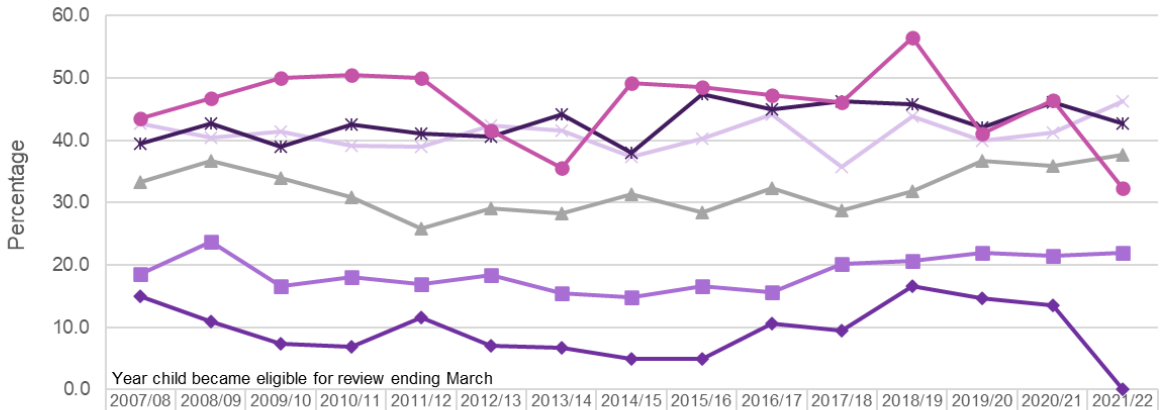


	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Exclusive breast	34.0	34.9	32.0	32.0	30.7	32.1	31.4	30.5	32.8	35.3	32.6	37.0	36.2	37.7	38.1
Formula	56.1	57.0	59.4	57.8	59.9	58.8	59.4	59.8	56.1	55.3	56.0	52.8	53.2	50.8	50.1
Mixed breast and formula	9.9	8.0	8.6	10.3	9.4	9.2	9.2	9.6	11.1	9.4	11.4	10.2	10.5	11.4	11.7

Source: Public Health Scotland Infant Feeding Open Data

Breastfeeding rates remain higher among older women (Figure 30). The reduction in the percentage of babies exclusively breastfed by mothers under 20 years and over 40 years in 2021/22 reflects small numbers in these age groups.

Figure 30: Percentage of babies exclusively breastfed at 6-8 weeks by the age of mother in Highland

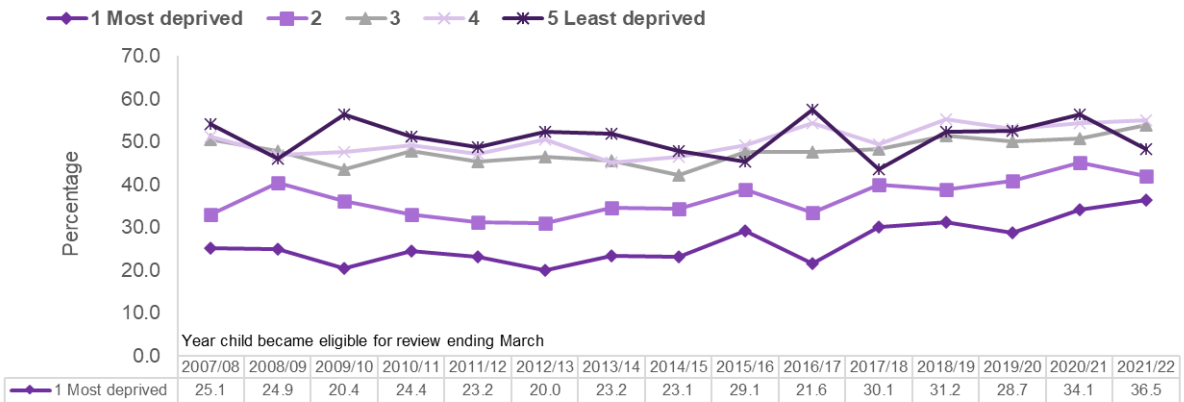


	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Under 20	15.0	10.9	7.3	6.8	11.5	7.0	6.7	5.0	5.0	10.6	9.5	16.7	14.6	13.5	0.0
20-24	18.6	23.8	16.7	18.1	16.9	18.3	15.5	14.8	16.6	15.6	20.2	20.6	21.9	21.5	21.9
25-29	33.3	36.7	34.0	30.8	25.9	29.1	28.3	31.3	28.4	32.3	28.8	31.8	36.7	35.9	37.6
30-34	42.7	40.4	41.4	39.0	38.9	42.4	41.5	37.3	40.2	44.1	35.7	43.8	39.9	41.2	46.3
35-39	39.5	42.7	39.0	42.5	41.1	40.6	44.2	38.0	47.4	44.9	46.3	45.8	42.0	46.1	42.7
40 and over	43.5	46.8	50.0	50.5	50.0	41.5	35.5	49.2	48.6	47.3	46.1	56.5	41.0	46.3	32.3

Source: Public Health Scotland Infant Feeding Open Data

Breastfeeding is more common among women who live in less deprived areas (Figure 31). From 2012/13, an increasing trend in the proportion of babies breastfed at 6-8 weeks in the more deprived areas in Highland can be seen. Consequently, over time, there has been a reduction in the inequalities gap in breastfeeding. This pattern is also observed nationally and is influenced by the association between the age of mothers and deprivation. However, breastfeeding remains a significant factor in inequalities in health; not being breastfed is both a cause and consequence of social inequality.

Figure 31: Overall breastfeeding (exclusive or mixed) by deprivation level (SIMD) in Highland at 6-8 weeks review

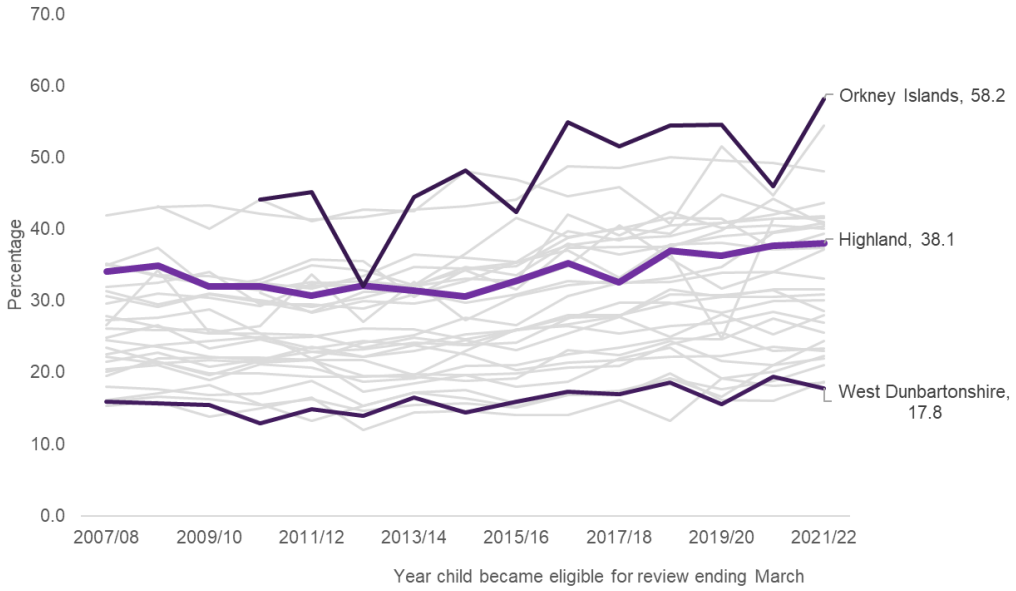


	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
1 Most deprived	25.1	24.9	20.4	24.4	23.2	20.0	23.2	23.1	29.1	21.6	30.1	31.2	28.7	34.1	36.5
2	33.0	40.5	36.1	33.1	31.1	30.9	34.5	34.3	38.8	33.4	39.9	38.9	40.9	45.1	41.9
3	50.5	47.9	43.5	47.8	45.5	46.4	45.5	42.1	47.6	47.5	48.3	51.4	50.1	50.8	53.9
4	51.2	47.0	47.6	49.1	47.1	50.5	45.1	46.4	49.1	54.3	49.4	55.3	53.0	54.4	55.0
5 Least deprived	54.1	46.0	56.4	51.2	48.8	52.4	51.9	47.9	45.4	57.6	43.5	52.2	52.6	56.4	48.4

Source: Public Health Scotland Infant Feeding Open Data

Highland currently has relatively 'mid-table' breastfeeding rates compared to other council areas in Scotland (Figure 32).

Figure 32: Percentage of babies exclusively breastfed at 6-8 week review by Council area of residence

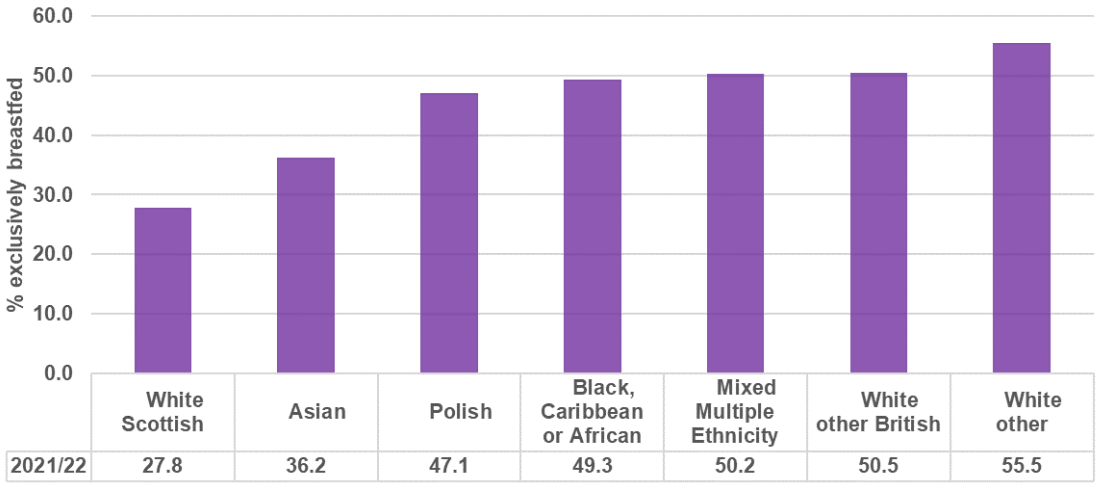


Source: Public Health Scotland Infant Feeding Open Data

Demographics, including deprivation and the proportion of mothers in different age groups, will partly explain the variation between Council areas. Social attitudes towards breastfeeding and the level of breastfeeding support in communities and from services will also contribute.

Breastfeeding rates across Scotland vary widely by ethnicity and highlight the different values placed upon breastfeeding by communities (Figure 33).

Figure 33: Babies in Scotland exclusively breastfed at 6-8 week review by ethnicity

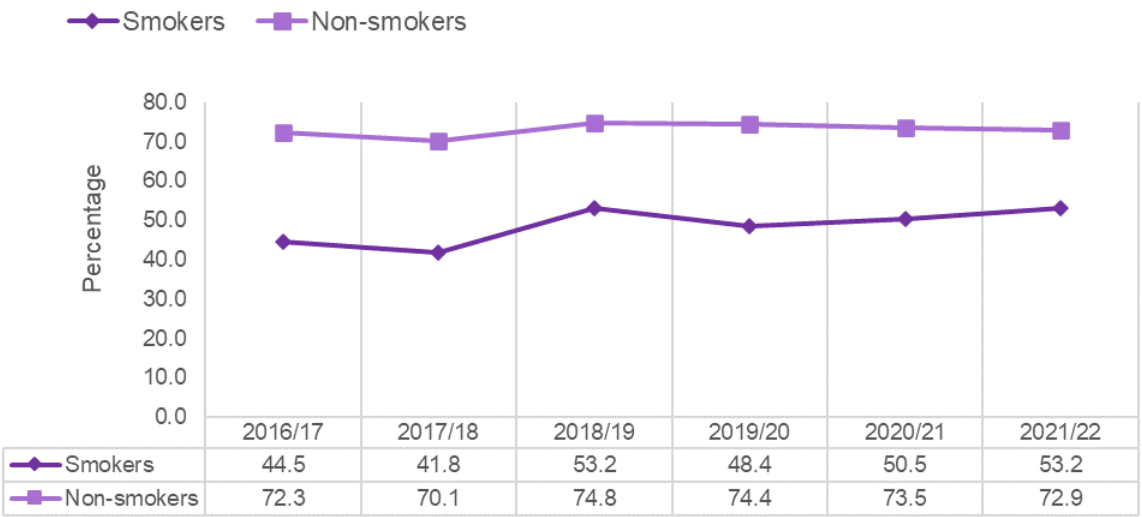


	White Scottish	Asian	Polish	Black, Caribbean or African	Mixed Multiple Ethnicity	White other British	White other
2021/22	27.8	36.2	47.1	49.3	50.2	50.5	55.5

Source: Public Health Scotland Infant Feeding Open Data

Currently, in Highland, 50 percent of smokers initiate breastfeeding compared with 70 percent of women who are non-smokers (Figure 34). The safest breast milk doesn't have harmful chemicals from tobacco. However, breastfeeding is healthier for a baby, even when their mother smokes, than formula feeding[17].

Figure 34: Highland residents with breastfeeding initiation recorded at the health visitor's first visit by smoking status



	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Smokers	44.5	41.8	53.2	48.4	50.5	53.2
Non-smokers	72.3	70.1	74.8	74.4	73.5	72.9

Source: Public Health Scotland Infant Feeding Open Data

Infant mortality

Most deaths during childhood occur during the first year of life, particularly in the first month of life (the neonatal period). Neonatal mortality accounts for about 70 to 80 percent of infant deaths.

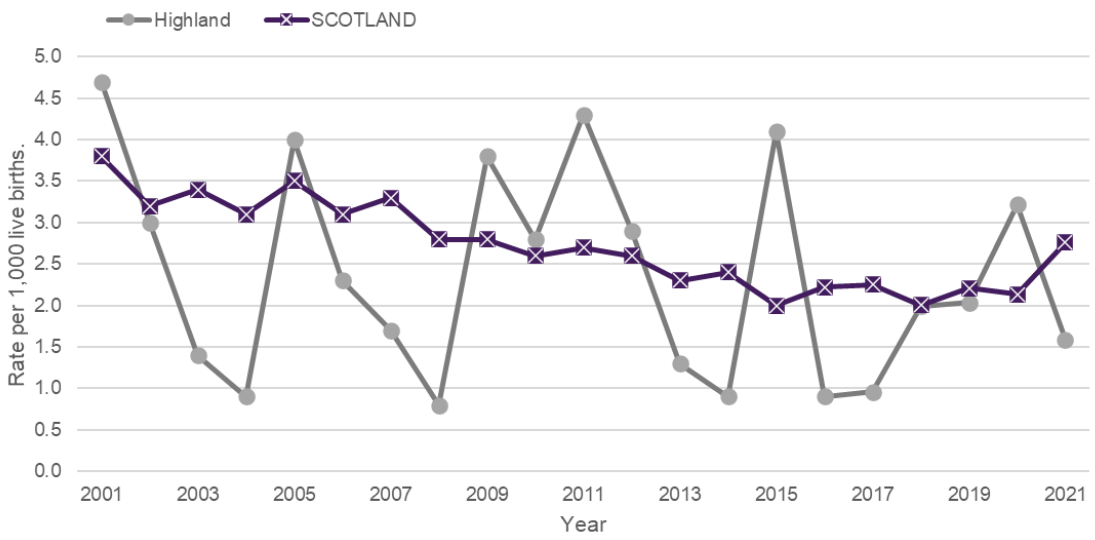
Most neonatal deaths are from perinatal causes, particularly preterm births, and are closely related to maternal health and congenital conditions, which disproportionately affect the most disadvantaged in society.

Healthy behaviours before, during and after pregnancy can protect the mother and baby. Breastfeeding is a protective factor for infant health and is particularly helpful for preterm babies.

Nationally infant mortality rates have declined, but in more recent years, the downward trend appears to flatten with an increase in the rate in 2021 (Figure 35). Pre-pandemic evidence highlights that from 2016, Scotland's most deprived quintile had already experienced rising infant and neonatal mortality trends[8].

A lack of improvement in this international sentinel indicator should be viewed as a health warning for society.

Figure 35: Infant mortality rates per 1,000 live births in Highland and Scotland



Source: National Record of Scotland Vital Events, Table 1.3

The number of infant deaths annually in Highland is small (Figure 36). The small numbers result in a significant percentage variation in rates between years (Figure 35).

Figure 36: Numbers of neonatal and infant deaths in Highland, 2001 to 2021

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Deaths in first week of life	9	6	2	2	8	4	3	1	8	6	10	5	1	2	9	1	1	3	4	4	1
Neonatal deaths	10	6	3	2	9	5	4	2	9	7	10	7	3	2	9	2	2	4	4	6	3
Infant deaths	11	7	4	3	10	8	4	6	12	10	14	8	5	3	11	3	3	6	6	10	4

Source: National Record of Scotland Vital Events, Table 1.3

Pregnancy and Newborn Screening

All pregnant women are offered a range of screening tests for communicable diseases and haemoglobinopathies in the women themselves and to screen for congenital anomalies and some specific genetic conditions (Down's, Edward's and Patau's syndromes) in the foetus. These screening tests consist of a combination of blood tests and ultrasound scans. A high-risk screening test result is followed up by diagnostic testing. The results give the women choices over the continuation of the pregnancy, for the support required through the pregnancy and, if applicable, after delivery for the infant's health care needs.

The newborn bloodspot screening programme aims to identify babies born with cystic fibrosis, sickle cell conditions, congenital hypothyroidism or a series of metabolic conditions. These conditions are rare occurrences with significant impacts on health and development. Early identification allows medical treatment that offsets and prevents poor outcomes as babies grow and develop.

The newborn hearing screening programme seeks to identify all babies born with a permanent bilateral hearing loss greater than 40dB. By addressing hearing deficits from the earliest point in time, the impact of hearing impairment on growth, development and wellbeing can be minimised.

The four pregnancy and newborn screening programmes have 32 key performance indicators (KPIs). There is a current challenge for NHS Highland to report on the pregnancy and newborn screening programme KPIs in the absence of national screening data systems.

A mapping of reporting requirements against data sources was undertaken in 2021-22 with input from staff groups from the four pregnancy programmes (against the required reporting schedule and data sources). The exercise identified deficits in data processes and system issues limiting accurate assessment of clinical standards and care quality. The main local requirement remains a programme of improvements focused on BadgerNet.

Health behaviours during pregnancy

Maternal Body Mass Index at booking

A high body mass index (BMI) during pregnancy increases the risk of complications for both mother and baby. Obesity in pregnancy is associated with an increased risk of miscarriage, stillbirth and recurrent miscarriage. Possible adverse outcomes are maternal blood clots, gestational diabetes, postpartum haemorrhage, pre-eclampsia, and extended labour[6]. While other risk factors will contribute, risks for the baby include congenital disorders, fetal macrosomia, growth problems, childhood asthma and childhood obesity.

In 2021/22, over 50 percent of Highland women giving birth were overweight or obese at the time of booking (Figure 37).

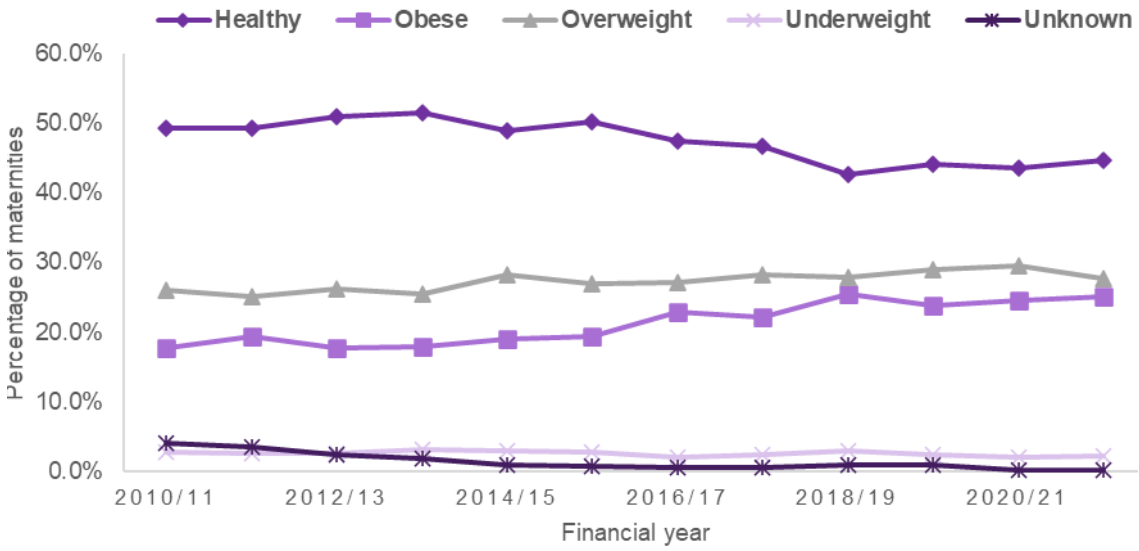
Figure 37: Number and percentage of maternities in Highland by BMI group in 2021/22

	Maternities	Healthy	Obese	Overweight	Underweight	Unknown	Total
2021/22	number	813	456	505	42	5	1,821
	percentage	44.6	25.0	27.7	2.3	0.3	100

Source: Public Health Scotland (SMR02) Open Data

The proportion of women overweight or obese is increasing (Figure 38).

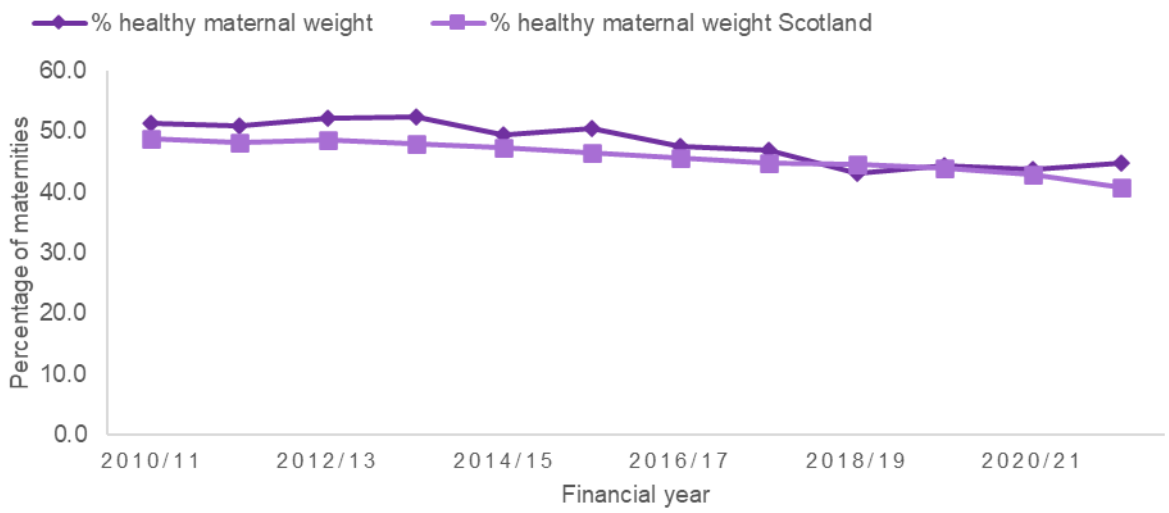
Figure 38: Percentage of maternities by BMI group in Highland, 2010/11 to 2021/22



Source: Public Health Scotland (SMR02) Open Data

The long-term trend to have fewer pregnancies of a healthy weight are similar in Highland and Scotland (Figure 39).

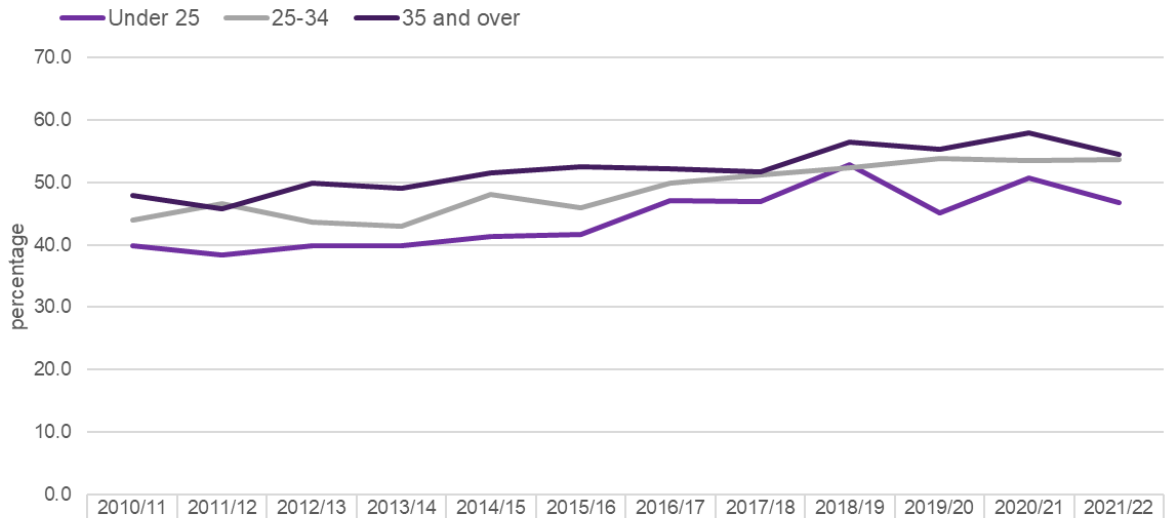
Figure 39: Percentage of maternities of healthy weight in Highland and Scotland, 2010/11 to 2021/22



Source: Public Health Scotland (SMR02) Open Data

The risk of having a higher BMI increases with maternal age, and deprivation is also a factor (Figure 40)[11].

Figure 40: Percentage of maternities overweight or obese by age group in Highland



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Under 25	39.8	38.4	39.9	39.9	41.4	41.7	47.1	46.9	52.9	45.2	50.7	46.7
25-34	43.9	46.7	43.7	42.9	48.0	45.9	50.0	51.2	52.4	53.9	53.5	53.7
35 and over	47.9	45.8	49.9	49.0	51.5	52.6	52.2	51.7	56.4	55.3	57.9	54.5

Source: Public Health Scotland (SMR02) Open Data

A high level of maternal obesity has implications for maternity and neonatal service provision. Increased resources are needed to care for these mothers. There is a higher use of caesarean section associated with obesity[11].

Smoking at the time of booking

Smoking during pregnancy is harmful to both mother and baby. Maternal smoking is associated with preterm and low birth weight babies and increased risk of miscarriage, stillbirth and Sudden Infant Death Syndrome (SIDS). It also increases the risk of the baby developing many respiratory conditions, attention and hyperactivity difficulties; learning difficulties; problems of the ear, nose and throat; obesity; and diabetes[3].

Smoking rates during pregnancy are lower than in the past. Still, over 13% of women in NHS Highland are recorded as smoking at the time of their antenatal booking. This means that over 230 infants are born to mothers who smoke (Figure 41, Figure 42).

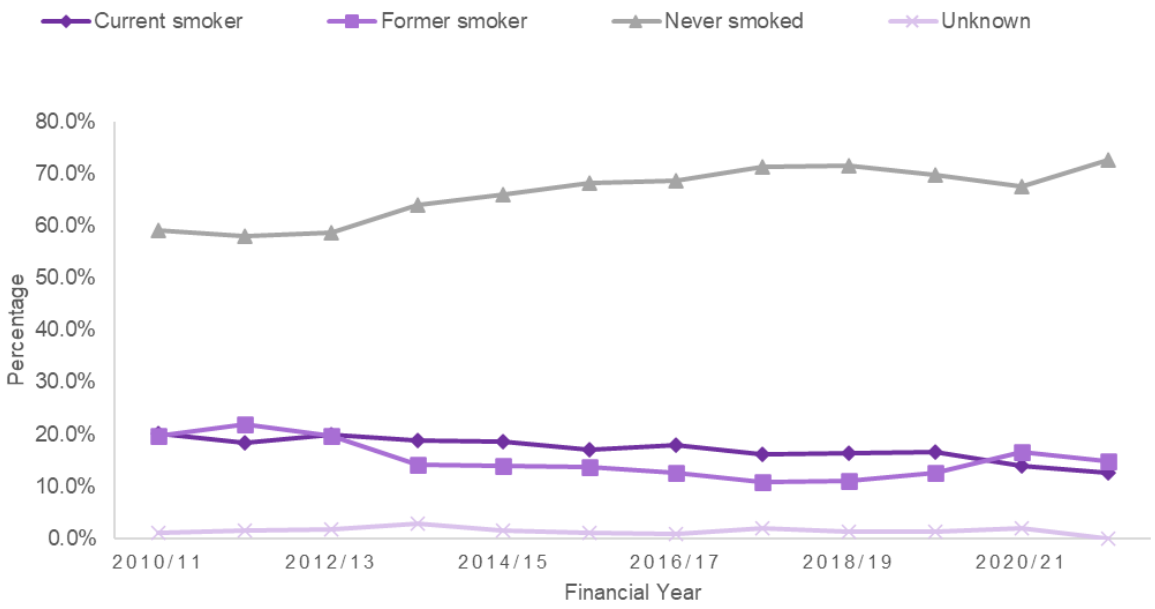
Smoking at antenatal booking is self-reported and consequently may under-report smoking prevalence.

Figure 41: Smoking status at antenatal booking of women resident in Highland who delivered in 2010/11 and 2021/22

	Current smoker	Former smoker	Never smoked	Unknown	Total
2010/11	473	461	1,384	26	2,344
2021/22	230	268	1,323	-	1,821

Source: Public Health Scotland (SMR02) Open Data

Figure 42: Percentage of women by smoking status at antenatal booking in Highland, 2010/11-2021/22[1]

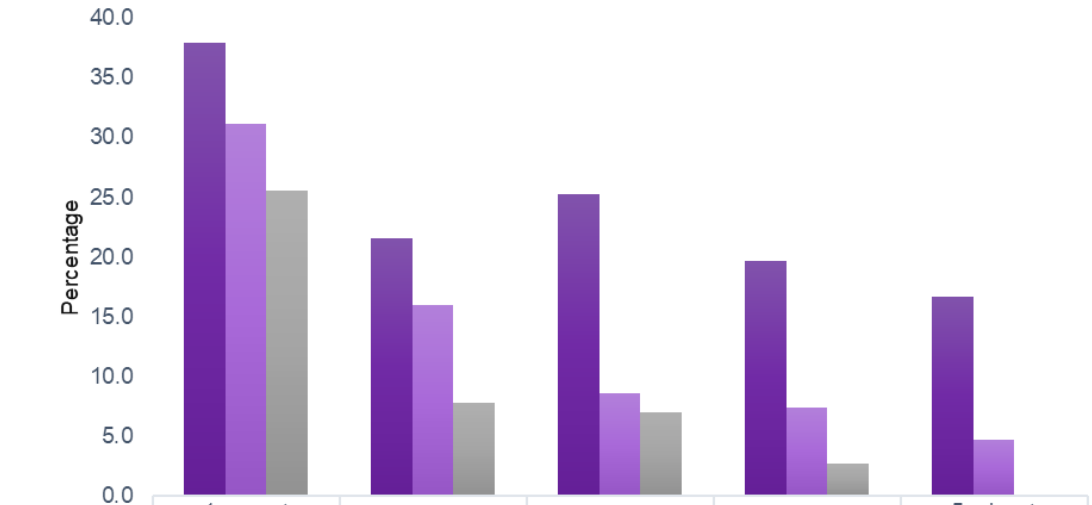


Source: Public Health Scotland (SMR02) Open Data
1. Women who delivered in 2010/11 to 2021/22

Deprivation and age are key risk factors for smoking. There are also marked differences between women of different ages and socio-economic groups in smoking behaviour during pregnancy (Figure 43). Infants born to smokers are much more likely to become smokers themselves, which perpetuates cycles of health inequalities.

Giving every child the best start in life must include protecting babies from the damage of tobacco smoke, both before and after birth. Smoking remains a significant challenge to population health and the NHS.

Figure 43: Percentage of women resident in Highland smoking at antenatal booking by age group and SIMD quintile, 2021/22[1]



	1 = most deprived	2	3	4	5 = least deprived
Under 25	37.9	21.5	25.3	19.7	16.7
25-34	31.1	16.0	8.6	7.4	4.8
35 and over	25.6	7.8	7.0	2.7	

Source: Public Health Scotland (SMR02) Open Data
1. Women who delivered in 2010/11 to 2021/22

Alcohol and drug use in pregnancy

Alcohol and substance use are part of the 'complex social factors' covered by the NICE guidance on antenatal care for pregnant women[6]. Problem substance use causes serious harm to fetal development. National estimates suggest that around 1% of pregnant women will be problem drug users, and a further 1% problem alcohol users; although some may use both[18]. Women who use drugs and alcohol in pregnancy experience stigma, as do their families and communities.

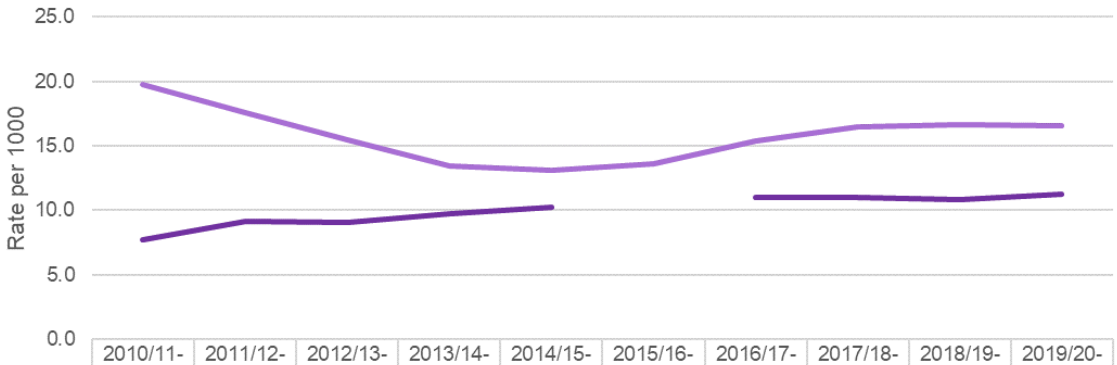
Drug use

Problem drug use is often associated with socio-economic deprivation and maternal health problems, including poor nutrition, smoking, alcohol misuse, mental health problems, complications from chronic infection, domestic abuse and homelessness. The effects of drugs on the baby include intrauterine growth restriction, preterm delivery, increased rates of stillbirth, neonatal death and sudden infant death. These outcomes are multifactorial and are also affected by socio-economic deprivation.

Information on drug use is collected as part of maternity recording but is based upon self-report, and data should be interpreted cautiously.

The rate of pregnancies recording drug use in Highland in 2019/20 - 2021/22 was 11.2 per 1,000 maternities (Figure 44). The rate is equivalent to drug use in around 20 pregnancies a year in Highland. The Scottish rate was 16.6 per 1,000, and reported rates are consistently higher nationally.

Figure 44: Rate per 1,000 maternities recording drug misuse in Highland[1] and Scotland



	2010/11-2012/13	2011/12-2013/14	2012/13-2014/15	2013/14-2015/16	2014/15-2016/17	2015/16-2017/18	2016/17-2018/19	2017/18-2019/20	2018/19-2020/21	2019/20-2021/22
Highland	7.7	9.2	9.1	9.7	10.2		11.0	11.0	10.9	11.2
Scotland	19.8	17.6	15.4	13.5	13.1	13.6	15.4	16.5	16.7	16.6

Source: Public Health Scotland (SMR02) Open Data
[1]No data reported for Highland in extract for 2015/16/ - 2017/18

Alcohol use

Alcohol is a teratogenic compound, a substance that can interfere with the normal development of the baby that readily crosses the placenta. Without a developed blood filtration system, the baby is unprotected from alcohol circulating in the blood system.

No safe level of alcohol use has been established during pregnancy[19]. Alcohol consumption during pregnancy can increase the risk of:

- Miscarriage
- Low birth weight
- Preterm labour
- Fetal Alcohol Syndrome (FAS)
- Fetal Alcohol Spectrum Disorders (FASD)

Self-reported alcohol use data in pregnancy is collected at first antenatal booking. However, the information's accuracy is questionable compared with the prevalence of women who drink during pregnancy reported in large-scale population studies, and completeness is also an issue.

In 2021/22, maternity data suggest that less than one percent of Highland women drink alcohol in pregnancy.

In contrast, a large-scale European study highlighted that 28.5 percent of UK women reported alcohol consumption during pregnancy. In this study, women who reported drinking alcohol during pregnancy were more likely than the others to be older, more highly educated, in employment, and to have smoked before pregnancy[20].

Conclusions

A rapid report of this type cannot provide a complete picture of the population's needs relating to pregnancy and birth. It highlights key points to help inform the planning and improvement of services.

The following main points were identified:

- The population of women of childbearing age in Highland decreased by four percent between 2011 and 2021. Population projections suggest a continued reduction in the population of childbearing age.
- Teenage pregnancies have fallen markedly, but there is room for further improvement in this long-standing national priority.
- There is variation in booking for antenatal care by population groups likely to have higher needs, notably women under the age of 20, women over the age of 40 and women living in the most deprived quintile of deprivation.
- The recording and reporting of complex social factors and vulnerabilities in the maternity record are essential. Data capture about vulnerable women should continue to be improved.
- There have been decreasing numbers of births in Highland, and the immediate impact of the COVID-19 pandemic did not modify recent birth trends. This pattern of decreasing birth numbers is expected to continue.
- Reducing stillbirths and infant mortality should continue to be a priority for action.
- Patterns of preterm births and low birth weight are associated with complex social factors, deprivation and maternal risks. Attention should be given to preventative actions to reduce risks.
- There is strong evidence that breastfeeding is one of the most preventative health measures for children and mothers, with short-term and long-term benefits. Actions to improve breastfeeding uptake should be prioritised.
- A programme of improvements focused on BadgerNet should be undertaken in order to report on pregnancy and newborn screening indicators.
- Women with complex health needs include women who smoke, women who are obese and women who use alcohol and drugs during pre-conception and pregnancy. These factors are linked to deprivation and inequalities.

Wider environmental issues, deprivation and social inequalities influence the levels of health need and pregnancy outcomes identified in this report. Preventative activity in pre-conception, pregnancy and early years should be strengthened, and prevention explicitly considered as a part of service and pathway design or redesign[21].

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Risk Rating Key
High (15-25)
High Moderate (10-12)
Moderate (8-9)
Low Moderate (4-6)
Low (1-3)

Appendix 2: NHS Highland Risk Register for Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian

Risk ID	Risk Name	Description	Owner	Risk Likelihood	Risk Impact	Risk Rating	Mitigating Actions
001	Recruitment	Recruitment of required staff in NHS Highland across a range of disciplines may not happen as quickly as the service requires due to competing organisational priorities or external factors, such as the recruitment pipeline of staffing required to support safe staffing levels and contribute to a networked model of maternity care.	W&C Head of Operations	5	4	20	Alignment with recruitment strategy. Escalation of any timescale issues to Maternity & Neonatal Programme Board. Escalation of any risks or issues to joint programme board. Ongoing collaboration with NHS Grampian to leverage skillmix and alternative options where appropriate. Ongoing collaboration with NES to leverage skillmix and alternative options where appropriate. Monitor recruitment through People and Culture workforce dashboard.
002	Gynae Service Provision	Impact of gynae service provision and physical space required for care to be delivered due to displacement from Ward 9B.	W&C Clinical Director	4	3	12	Options appraisal for repatriation of space for gynaecology.

003	Retention	Risk that retention rates may be affected while strategic improvements are implemented.	W&C Head of Operations	4	4	16	Colleague experience work launched pan W&C with support from Organisational Development to seek to address issues and "wicked problems." Strategic action-based plan will be formed once consultancy period closes.
004	Capacity	Capacity and active engagement from operationally based staff across maternity and neonatal services is required in order to realise the benefit of ongoing improvement work (e.g., Best Start).	W&C Head of Operations	4	4	16	Escalate any improvement related delays/issues and risks in this area to the Maternity & Neonatal Programme Board.
005	Decant	There is a risk that decant has the potential to limit the number of beds at Raigmore, which is already under pressure. This could potentially further induce strain on NHS Highland having enough beds to deliver activity as detailed in delivery plan.	W&C Head of Operations; Head of Estates & Facilities	3	4	12	Monitor actively through available intelligence; ensure staff are consulted upon with regards to planned decant process; ensure staff (clinicians and non-clinicians) receive fair notice of decant prior to taking place.
006	Delays in business case approval	Delays in business case approval process may result in lost time to enable recruitment and refurbishment work to take place; If additional workforce required is unable to be funded, this would result in sustained pressure and capacity constraints within the neonatal unit, ward 9, ward 10, labour suite and high dependency area which may present a risk to service delivery and quality of care.	Maternity & Neonatal Programme Board, chaired by Chief Officer of Acute	3	3	9	Engage directly with SG upon request should SG require any additional information before a decision to allocate funding is received.
007	Ability to achieve continuity of carer	Due to current issues with recruitment and retention, continuity of carer is difficult to achieve on average due to lack of staffing resources to support consistency.	Director of Midwifery; W&C Clinical Director	5	4	20	Recruitment of key additional staff, and retention of staff currently in post, is the key enabler to achieving continuity of carer in Highland.
008	Accommodation for community hubs	Community midwifery sites in Highland are without units/physical space to support care, which impacts the woman's ability to choose	Director of Midwifery	4	3	12	Ensure community midwifery sites are adequately provisioned for in relation to space requirements to deliver care.

		midwifery led care as an option of care receipt.					
009	THC funding	Due to funding constraints with partner organisations, this may impact the level of support care that is offered to maternity and neonatal patients and their families	Chief Officer – Acute	5	4	20	Funding requested by way of this standard business case will start to mitigate this risk. Risk will be fully closed once required workforce is in post to sustain AHP workforce within maternity and neonatal unit.
010	Intelligence and Ease of Reporting	Due to the influx of dashboards in planning, intelligence support entailed with the NTC, and other competing priorities, the BI team may not be able to process the maternity and neonatal dashboard request as quickly as originally planned for.	Head of eHealth; W&C Clinical Director	5	4	20	The business intelligence support analyst proposed within the business case can mitigate an element of this risk.
011	Current maternity and neonatal facilities	The current maternity block restricts the efficiency and suitability of adequate, practical bed flow.	W&C Clinical Director; W&C Head of Operations; Head of Estates & Facilities	5	5	25	The capital planning element of the business case proposal offers a solution to this, thus improving the quality and experience of care received for maternity patients and their families.

EXISTING 2020

WORK IN PROGRESS - preparation of decant space

MINOR WORK IN PROGRESS

WORK COMPLETED

Prepare decant - either modify eHealth Annexe, or relocate and reconfigure Scotia Court units to area adjacent to Maternity.

Other perpheral activities relocated to Clava etc.

PHASE A

WORK IN PROGRESS

Ground Floor, Central Core, Clinic space

MINOR WORK IN PROGRESS

Ground Floor, Central Core

WORK COMPLETED

none

Work to create new, additional clinic suite, along with minor works to iinstall sprinkler in Central Core including adjacent offices/rooms

PHASE B

WORK IN PROGRESS

Ward 9

MINOR WORK IN PROGRESS

Ground Floor, Central Core

WORK COMPLETED

Ground Floor, Central Core, Clinic space

New Clinic Suite completed, and finish off Central Core.
Commence works to Wards 9A & B to accommodate the decanted Ward 10

PHASE C

WORK IN PROGRESS

None

MINOR WORK IN PROGRESS

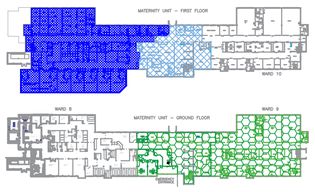
None

WORK COMPLETED

Ground Floor

Complete Ward 9, ready to accommodate ward 10

PHASE D



WORK IN PROGRESS

Labour Suite, SCBU

MINOR WORK IN PROGRESS

First Floor, Central Core

WORK COMPLETED

Ground Floor

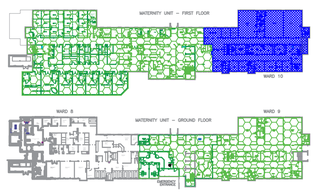
SCBU amd Labour Suite move into Ward 10 (wit minor works to add MGPS outletsetc

Start works in current SCBU and labour Suite

Commence fire impprovement works in Central Core and Obstetric Theatre

(Ward 10 operate out of Ward 9)

PHASE E



WORK IN PROGRESS

Ward 10

MINOR WORK IN PROGRESS

None

WORK COMPLETED

Ground Floor, Labour Suite, SCBU

Complete SCBU & Labour Suite, and decant them back into original location.

Complete fire improvement works to Central Core

Begin alterations to Ward 10 for its return

(Ward 10 still operating out of Ward 9)

COMPLETE

WORK IN PROGRESS

MINOR WORK IN PROGRESS

WORK COMPLETED

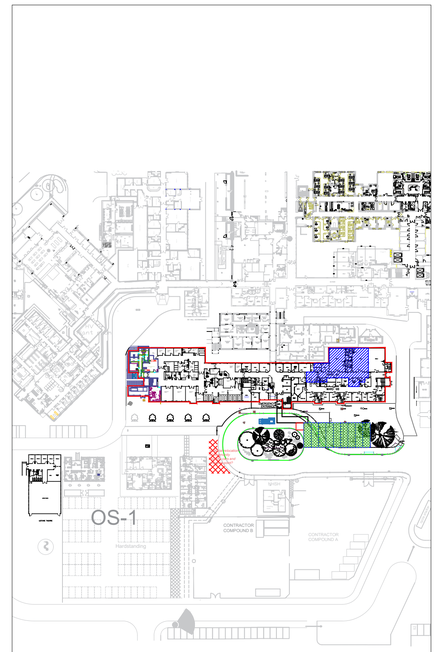
Complete Ward 10 and re-occupy.

Minor refurb to Ward 9 to enable it to return.

Vacate remote decant activities back into main building

Potential centralisation of fetal scanning into 'Maternity Extension'

NHS Highland



Highland Health Board

RAIGMORE HOSPITAL

Estate Management Department
Raigmore Hospital
Old Perth Road Inverness IV2 3UJ
Tel 01463 704000 Fax 01463 704496

Raigmore Hospital

Maternity Reconfiguration

Maternity Reconfiguration

Potential phasing

Drawn: CJM

Scale: not to scale

Date: 12 Aug 2022
Drawing No.: Z8_Phasing
revision: A

Refurbishment floor plans – ground floor – Version 1

Scan 5 and 6 waiting area becomes scan 5 EPAU waiting area.

Scan 6 becomes shared office space for Carole, Sunni, April and Caroline – leaving upstairs office space clear.

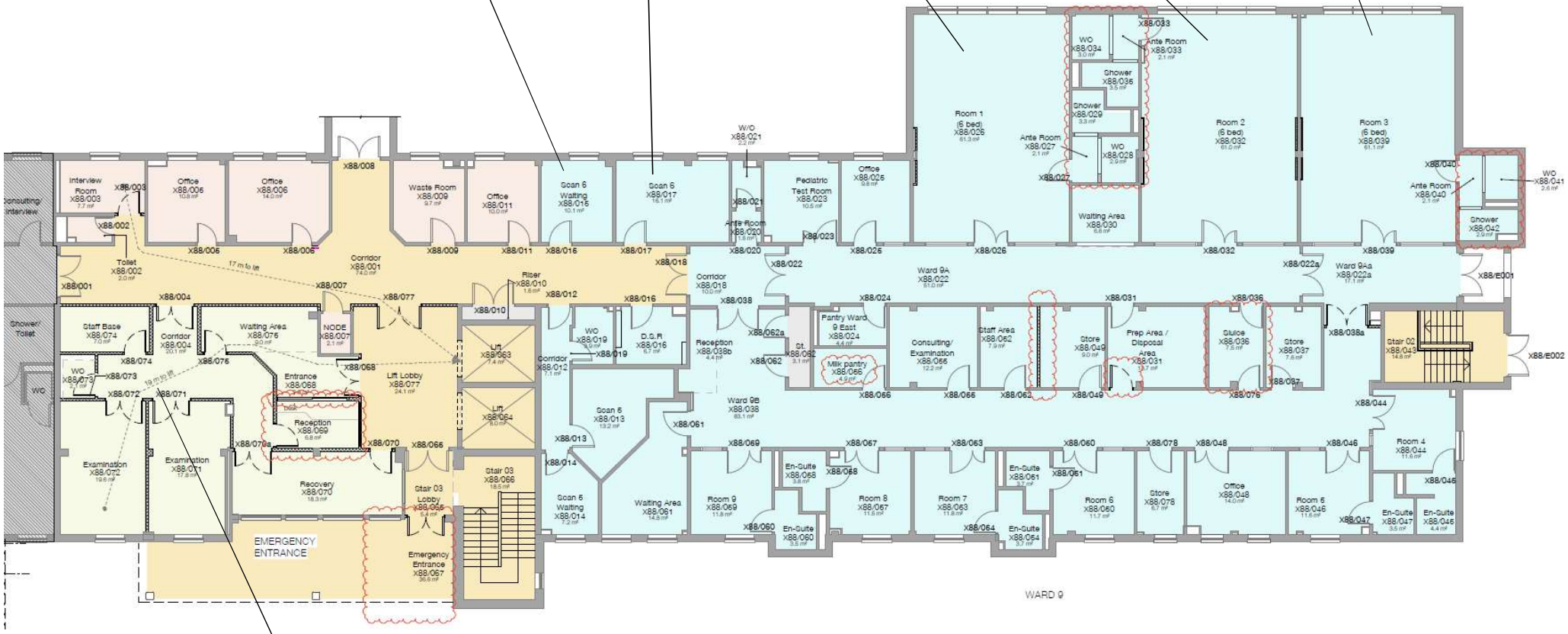
Scheduled day case care

Room 2 -

Postnatal Care

Room 3

Transitional Care



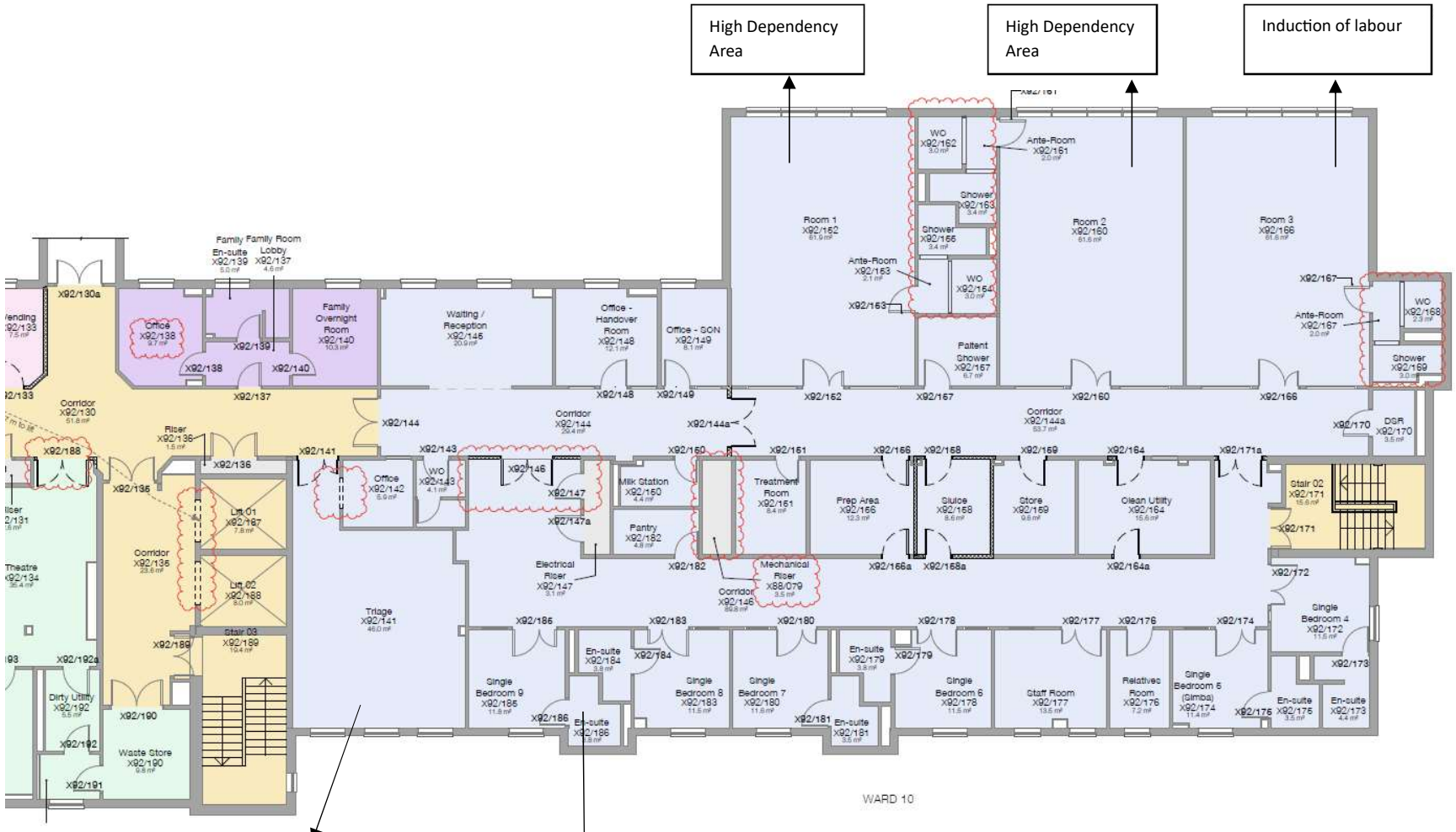
Reconfigure space to accommodate:

Maternity reception

Antenatal high risk specialist clinics- Twins/SGA, Diabetes, Maternal medicine, Fetal medicine. Mapped to ensure full utilisation.

Obstetric Ultrasound from scan 6 space housed and additional one scan room.

Refurbishment floor plans – First floor – Version 1



Outcome 1 – Start Well

Give every child the opportunity to start well in life by empowering parents and families through information sharing, education and support before and during pregnancy

ADP Ref	Metric	Detail	Target	Current	Trend	Assurance	Commentary
1C.1	LDP Standard	Ante-natal Care by 12th week (% average across all sites)	90%	94%	→	Positive	Relatively stable since last month (96%).
1C.1	Internal Monitoring	Births in Raigmore	n/a	115	↘↗	Neutral	Decrease by 2 since last month.
1C.1	Best Start	Births in CMUs	n/a	1	↘↗	Neutral	1 birth was in Fort William CMU.
1C.1	Internal Monitoring	Average occupancy in maternity wards in Raigmore	n/a	21.5% - 50.5%	↘↗	Neutral	9A: 35.5% / 9B: 21.5% / 10: 50.5%/ Labour suite: 46.2% / HDA: 23.4%/ NNU: 50.5%. On average, occupancy has decreased for ward 10, ward 9a, ward 9b, High Dependency Area.
1C.4	Best Start	C-Section rates	n/a	46.9%	→	Negative	One of the highest rates in Scotland. Slight decrease from last month. 40% average across Scotland.
1A.2 1C.4	Best Start	Breast feeding rates	n/a	82.4%	→	Positive	Slightly above National average, and has remained stable since last month.
1C.4	Best Start	Induction of labour rates	n/a	39%	↘	Neutral	Decrease since last month. In line with national average.
1C	LDP Standard	IVF waiting times	90%	100%	→	Positive	Service is north wide and we perform better than other regions
1C.6	Best Start	Skin to Skin	Tbc	71%	↘	Neutral	Decrease by 7% since last month. Neonatal unit admissions were the remaining.
1C.1	Internal Monitoring	Neonatal Unit Admissions	Tbc	<26 wks: 1; 26-30 wks: 2; 31-36 wks: 10; <36 wks: 6 19 total	↘↗	Neutral	Increase by 4 NNU admissions since last month.

Appendix F: List of Benefits Identified

This business case proposes how maternity and neonatal care can be enhanced to meet the needs of Highland women and their families and support a networked model of care delivery with NHS Grampian through:

I) Establishing increased service provision to improve quality of care, patient experience and enable a more robust and sustainable service;
II) Refurbishing existing physical space so that women feel better supported within the maternity and neonatal unit at Raigmore Hospital;
III) Creating additional options for women to receive midwifery-led care by establishing an Alongside Midwifery Unit (AMU) on Raigmore Hospital's estate and increasing midwifery led care provision.

No benefits were identified with a priority rating of less than 3.

Benefits of objectives I – III as listed above		
Benefit Rating 3	**Benefit Rating 4**	**Benefit Rating 5**
Increased confidence in portfolio of regional maternity and neonatal services	En-suite facilities offered to women and their families	Improved patient experience and health and well-being of local population and regional population
Improved community confidence and morale	Provides additional space for staff	Sustainable service delivery which will support working in a networked maternity and neonatal care delivery model
	Creation of a healing and comfortable environment, reducing recovery times for in-patient stays	Reduction in health disparities for Highland women and their families
	Patients receive integrated care across midwifery and consultant led services	Services that are built around prevention and improving health outcomes of women and their families
	Training, development and upskilling of workforce means everyone can work at their topmost skill level	Increases provision and provides compliant patient areas and facilities
	Improved access to care choices for Highland women over the course of their pregnancy and birth	Updates 34-year-old accommodation to deliver today's healthcare services in line with current clinical and facility guidelines
	Improved staff morale and sickness/absence rate	Offers multi-purpose spaces to provide patient isolation, clinical examination and staff training
	Improved flexibility of configuration of maternity and neonatal unit to separate different types of flow within hospital easily	Minimises impact on other wards, areas and surrounding features

	according to the individual needs of the woman	
	Partnership with NHSG (DGH) offering synergies on site and off site and opportunities to maximise care delivery	Provides additional parentcraft overnight accommodation for families
	By creating provision for an AMU, this will result in less likelihood of interventions	Provides additional floorspace to labour suite and neonatal departments
	Provides efficient working and improved service provision and monitoring through digital improvements	Improves bereavement environment and provides SIMBA room within Ward 10
		Designated space for transitional care in line with delivery of national strategy
		Makes area compliant with fire regulations
		Maximised value through recruitment of substantive staff; For medical provision, this will help address treatment and waiting times within gynaecology and ensure quality of care is maintained
		Physical space and staffing establishment that is able to facilitate care that is guideline and policy concordant and needs-informed
		Improved extent to which women and their families are appropriately involved in their care and feel dignified and respected through improved access to services that meet their individual needs and/or preferences
		Timely care with a reduction in delays

SBAR for ECOG 6 March 2023

Joint Maternity Board Update

Situation

At the previous meeting, a proposed structure was shared with ECOG which set out a supporting framework to take forward the implementation of the Integrated Maternity Model as set out in the Joint Plan submitted to Scottish Government on 15 December 2022.

That structure proposed a number of dedicated subgroups including

- Clinical Collaborative
- Workforce Planning
- Communications and Engagement
- Planning

The Joint Board also reported that confirmation of the funding was still outstanding from Scottish Government and this was crucial to progressing with recruitment – with workforce a key risk area for the Joint Plan. This paper provides an update on progress.

Background

The Joint Maternity Board meets monthly and is co-chaired by Katherine Sutton, Acute Operating Officer, NHS Highland and Simon Bokor-Ingram, Moray Portfolio Lead, NHS Grampian. Representation is multi professional and multi-agency including midwifery and medical colleagues from both Boards as well as from NHS Education for Scotland.

The Joint Board is responsible for oversight and leadership of the Joint Plan for delivering an Integrated Model for Maternity Services.

Assessment

In progressing towards a confirmed funding position, there have been a number of communications with colleagues from Scottish Government including the provision of additional information as requested by the External Scrutiny Panel on the detail of the submitted plan, by letter, by email and in conversation. An in person visit is scheduled by the Panel to Highland and Grampian on 23rd, 24th March and planning is being supported by Board colleagues.

Following a joint meeting with senior colleagues from NHS Highland and NHS Grampian in February, it was agreed to formalise a joint request for funding to enable immediate recruitment to begin and this has been submitted to Scottish Government in February. Details of the request are in the Workforce Update paper for this meeting. The importance of funding being confirmed by end of March 2023 has been highlighted.

Briefing meetings have also been held with MSPs both individually and jointly to update on progress. Two in-person meetings have also been held with Keep Mum which have been very positive and have resulted in shared projects being taken forward to support community engagement and recruitment marketing.

Further discussion and review amongst members of the Joint Board have refined the proposed structure which will now include an additional sub group to focus on the digital and data workstream in support of integrated data. (see below) Terms of Reference are now in place for four of the five subgroups and each sub group will have an immediate task to develop a clear action plan which will be used as the benchmark for monitoring and reporting. The Joint Board has redesigned its standing agenda format to support this including monthly flash reports from each sub group.

Readiness to proceed with recruitment is assured and the Clinical Collaborative has 12 months of scheduled meetings and seminars with nominated topics for development.

Recommendation

- ECOG is asked to note progress of the Joint Maternity Board since its meeting in January.
- ECOG is asked to review scheduling to allow a two week turnaround period between meetings of the Joint Board and ECOG. This will enable reporting time and collation of items for escalation.

Proposed Draft Structure for Delivery of Moray Maternity Service Plan – Updated March 2023

Maternity Services Joint Board

Focus: Joint Oversight and Direction and Joint Reporting to ECOG

Joint Chairs: Katherine Sutton / Simon Bokor-Ingram

NHSG Women's Board

NHSH Maternity and Neonatal Programme Board

Clinical Collaborative

Focus: Pathway Development and Clinical Teams Development

Joint Chairs: Mary Burnside / Jane Raitt

Workforce Planning Group

Focus: Workforce Development (roles and teams)

Joint Chairs: Isla Barton / Jane Raitt

Digital Health

Focus: Data sharing and digital pathways

Joint Chairs: Digital Midwives

Communications and Engagement

Focus: Internal and External Communications and Engagement

Joint Chairs: Ruth Fry / Stuart Humphreys

Planning Group

Focus: Joint Programme Management and Reporting

Joint Chairs: Tracey Gervaise / Christina Cameron

NHS Highland Maternity & Neonatal Business Case - Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian

Equality Impact Assessment (EQIA)

Document Control				
Version	Revision Date	Status	Prepared by	Checked by
1	12/04/2023	Draft sent for comment to Senior Responsible Officer	Grace Barron	Tracey Gervaise 14/03/23

NHS Highland Maternity & Neonatal Business Case - Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian

Equality Impact Assessment (EQIA)

Description of work:
The Scottish Government Report of the independent review into maternity services for the women and families of Moray, commissioned by Cabinet Secretary for Health and Sport, Jeanne Freeman in March 2021 was published in October 2021. The report recommended a way forward that relied on NHS Highland being able to deliver capacity in terms of available midwifery, consultant and appropriately sized physical space to meet the needs of Moray mothers that may choose to deliver in Raigmore Hospital.

Over the preceding fifteen months work has been ongoing to develop a clear understanding of what would be required to support the NHS Highland Maternity and Neonatal Service to respond to this expectation set by Scottish Government.
This has involved:
Significant and extensive engagement with Midwifery, Nursing and Consultant Medical staff of the NHS Highland Maternity and Neonatal Service and partnership working with NHS Grampian colleagues through a joint NHS Highland / NHS Grampian Maternity and Neonatal Services Programme Board and clinical collaboration. A review of NHS Highland's ability to meet the requirements of The Scottish Government Best Start Policy that sets out the service specification and expectations of high quality modern Maternity Services.

- The co-ordination and completion of a Health Needs Assessment, with a focus on pregnancy and birth, to assess unmet health and healthcare needs to support planning and commissioning of services.

Whilst the scope of this redesign is centred on maternity and neonatal services, there are clear considerations around further development of NHS Highland, statutory and non-statutory partner agencies and organisations to plan and implement early intervention and prevention support mechanisms to improve maternal and infant health and wellbeing, and reduce inequalities at a multi-agency, community planning partnership level.

This Standard Business Case sets out the case for change, for safe and sustainable maternity and neonatal services that respond to local population need and risk. . The arrangements as proposed will help support the delivery of a networked model of care through collaborative and joint working arrangements with NHS Grampian.

The networked model of care is at an early stage with pathways being developed and agreed between NHS Highland and NHS Grampian clinical staff disciplines and Teams.

NHS Highland Maternity & Neonatal Business Case - Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian

Equality Impact Assessment (EQIA)

This Equality Impact Assessment (EQIA) is focused on the strategic decision making process adopted to progress with the networked model of care . The EQIA will be reviewed and updated on a regular basis as the implementation of the model is progressed, aligned with key decision points, governance and performance management reporting arrangements.

Outcome of work:

NHS Highland deliver care in line with Scottish Government policy and initiatives e.g. Best Start: five-year plan for maternity and neonatal care (2017) and the Women's Health Plan (2021) objectively designed to improve health and reduce inequalities for women.

This standard business case presents opportunities to improve access to care for women and their families in Highland, create additional opportunities for patients to choose how they would like to receive their care and enable a refurbished environment to facilitate care delivery through adherence to space regulations, improved training space for clinicians and compliments Best Start strategic objectives.

The networked model of maternity and neonatal care delivery will enable Highland:

- To deliver on Scottish Government direction to establish safe maternity pathways in Highland for Moray women.
- To create additional capacity to meet the need of Highland and Moray women and their families.
- To make best use of all locally available resources by adoption of a value based approach.
- To present additional opportunities relating to the continuous improvement of maternity and neonatal services for the service user and service providers.
- To ensure women in Highland have as much choice as possible over the course of their pregnancy and birth.

The redesign will:

Ensure maternity and neonatal care is person-centred, flexible adaptable, effective and efficient. Focus on meeting the needs and preferences of Highland women and their families. Facilitate a focus on social determinants of health, such as social inclusion and protection.

Promote a more proactive approach to care, focussing on strengthened midwifery-led services designed to reduce the likelihood of medical interventions during pregnancy and labour, improved access to individualised support during pre-conception, pregnancy, labour and after birth and thereby avoiding a medical intervention response and hospitalisation wherever possible.

Together, this will have a greater impact on improving health and wellbeing compared to health and care services on their own.

A networked model of maternity and neonatal care with enhanced approaches with a focus on early intervention, prevention and self-care. This will be supported through a refurbished maternity and neonatal unit in Raigmore Hospital, enhanced staffing profile and joint clinical pathways with NHS Grampian.

Who:

Stakeholders: (who will this work affect?)

The proposed changes may impact on people with protected characteristics. It may also impact on non-birthing parents/carers and people living in rural and remote communities and those living in areas recognised to be disadvantaged (SIMD). Specific impacts on protected characteristics are described subsequently in this EQIA.

Staff may also be temporarily affected by changes to physical work space e.g. temporary change of work base location during the decant phase of the refurbishment capital planning works.

Sustainability of services has been an issue and by changing/redesigning, there are opportunities to improve staff experience as well as creating a more sustainable model.

Other key stakeholders include:

- Women and their families in the community (and by association children and young people)
- NHSH Gynaecology services
- NHSH Paediatric services
- Statutory partner services based in North Highland e.g. social work and police and the third sector interface (voluntary sector)
- Wider NHS Highland service providers, not exclusive to delivering maternity and neonatal care
- Moray based NHS Grampian services e.g., Dr Gray`s (this includes maternity services) and Children and Family Health Services (this has been taken forward by NHS Grampian)

Moray based local authority Children and Families Social Work Services (to be confirmed by NHS Grampian)

- Women and families in Moray who may prefer to deliver in Inverness once the networked model of care is operational
- Community led groups

- Isolated rural communities and individuals
- Patients on paediatric and gynaecology waiting lists who are currently unable to be seen within 18 weeks

How do you know:
Stakeholder engagement has been carried out for the past 15 months, and continues to be part of business-as-usual service delivery and identifying quality improvement opportunities that are based on lived experience.

Please reference Highland Pregnancy and Birth Needs Assessment (2023) document which includes key evidence relating to women who share protected characteristics and a series of findings to improve health and reduce inequalities as part of continual service improvements.

Together, the outputs from stakeholder engagement and the issues and actions within the Highland Pregnancy and Birth Needs Assessment (2023) provide an overview of how women and families in Highland may be impacted by the improvements to services and the potential opportunities to improve service planning and delivery to address inequalities as referenced in the Standard Business Case.

What will the impact of this work be?

Transport and access – Improved access to maternity and neonatal services including an alongside midwifery unit (AMU) may mean this is a more and preferred choice of delivery for
Age - Teenage pregnancies have fallen markedly in Highland, but there is room for further improvement in this long-standing national priority. The appointment of specialist midwifery roles will support sustaining this national priority.

Disability - Close consultation with local access panel and community representatives is required as part of the refurbishment works planned to take place in Raigmore Hospital's maternity and neonatal unit.

Gender reassignment – no additional, new impacts or barriers are identified for this population group.

Marriage and civil partnership - no additional, new impacts or barriers are identified for this population group.

Equality Impact Assessment (EQIA)

Pregnancy and maternity – The focus of the business case is to improve access to maternity and neonatal care services, which in turn will improve outcomes for women, babies, and families.

Race – whilst general research and experience highlights that additional race and cultural sensitivity and awareness is required to ensure services are accessible, no additional, new impacts or barriers are identified for this population group.

Religion or belief - whilst general research and experience highlights that additional religious and cultural sensitivity and awareness is required to ensure services are accessible, no additional, new impacts or barriers are identified for this population group.

Gender – whilst general research and experience highlights that additional gender awareness is required to ensure services are accessible, no additional, new impacts or barriers are identified as a result of service redesign. The exception to this consideration is around patient impacts as detailed in the Highland Pregnancy and Birth Health Needs Assessment (2023) and Standard Business Case, which inherently fall to women. Due to this fact, the improvements in care services should benefit women overall across Highland.

Sexual orientation - no additional, new impacts or barriers are identified for this population group

Successful economic and social generation and regeneration can only be achieved through a whole system approach, of which NHS Highland is a key player and contributor.

Engagement with the local population, including women and families residing in Highland and Moray, including those belonging to equality groups, will continue throughout the next phase of service and physical build redesign. This will ensure that decisions made in relation to this programme or work responds to, where possible, the needs of the local population including people who experience lower health and wellbeing outcomes.

Given all of the above what actions, if any, do you plan to take?

ACTION: To consider the needs of deprived populations within Highland, as per the Fairer Scotland Duty and with intelligence insight from the Highland Pregnancy and Birth Health Needs Assessment (2023), and to involve these communities in engagement and consultation to help identify and address challenges over the course of implementing a networked model of maternity and

neonatal care with NHS Grampian.

ACTION: Preventative Work: Ensure prevention is core to delivering robust and sustainable maternity and neonatal services through the appointment of consultant midwifery and specialist midwifery roles as outlined in the Standard Business Case.

ACTION: Joint NHS Highland and NHS Grampian Communications and Engagement: to review and update the engagement plan to inform the implementation phases associated with enabling a networked model of care with NHS Grampian, and to ensure that people with protected characteristics are represented.

ACTION: Governance: The project team to review this EQIA on a quarterly basis and to take account of issues in proposals presented to the programme board.

Appendix 1: Stakeholder Engagement

Fortnightly NHSH Maternity and Neonatal Programme Board meeting
Monthly NHS Highland and NHS Grampian Joint Maternity and Neonatal Programme Board meeting
Monthly Executive Collaborative Oversight Group
Highland Maternity Voices Partnership
NHS Highland clinical engagement sessions and 1:1s with clinical and non-clinical stakeholders to inform development of business case
NHS Highland Maternity & Neonatal workshop

- 11 May 2022
- 13 January 2023

Joint Clinical Engagement Sessions
NHS Highland Board Development meetings

- 30 August 2022
- 28 February 2023

Lived Experience Maternity & Neonatal Survey – Highland-based
Together We Care Survey – Highland-based

NHS Highland Maternity & Neonatal Business Case - Enabling Robust, Sustainable and High-Quality Local Maternity and Neonatal Services and Contribute to the Networked Model of Care with NHS Grampian

Equality Impact Assessment (EQIA)

Press Releases:

- March 2022 – Maternity Report Response
- Courier Column – 8th June 2022
- Media Release: Joint NHS Grampian and NHS Highland statement on Moray Maternity Services

DRAFT FOR NHS GRAMPIAN BOARD CONSIDERATION
15 DECEMBER 2022

Moray Maternity Services
Model 6
Milestones and Timescales

Executive Summary

NHS Grampian and NHS Highland have worked collaboratively during 2022 to jointly consider and map the journey that will culminate in the agreed model of maternity services for Moray: Consultant –led obstetric services delivered in Dr Gray's Hospital, Elgin in 2026.

We know this journey is not straightforward. The challenges that led to a change in 2018 to a midwife led service in Elgin have not diminished and a long timeframe makes it difficult to plan precisely. What has been clear since the Cabinet Secretary's announcement in March 2022 is the commitment and enthusiasm shown by many staff groups to achieving this ambition, and the milestones to be reached along the way, including being able to offer elective sections locally by 2025 and working more closely with colleagues in neighbouring Boards. We know too that some colleagues have concerns about feasibility and we will continue to support all staff and stakeholders.

The discussions that have taken place in recent months have been with a wide range of professionals to determine the way ahead. Colleagues from maternity and other services, from NHS Boards and other partner agencies have contributed their time, knowledge and advice to understanding and describing the conditions that will require to be in place to achieve our objective. The attached set of milestones and timescales is a reflection of those discussions and contributions and adopts an aspirational approach to what can be achieved by collaborative working.

Additional new roles in midwifery, obstetrics, medicine and other disciplines, exciting training opportunities, modern and future-looking job plans and new ways of working are all features of what we will require to implement in achieving Model 6. Whilst recognising the challenges, we also see exciting opportunities to be innovative in shaping healthcare services in the north of Scotland, developing a networked model to bring sustainability to services which are often delivered by smaller teams. Joint working `between NHS Grampian and NHS Highland on workforce planning and development of the new roles will shape how posts can operate across a networked model.

The plan describes some of the interdependencies that are crucial to success. Working in partnership across Boards and with Scottish Government will be key to realising the vision and we also look forward to continuing to enhance our relationships with other stakeholders. As we progress in our journey to deliver consultant-led obstetric services in Dr Gray's we will maintain these relationships as we further refine and develop planning for the changes and resources that will be needed.

In further support of implementing the planned changes, a clear strategic direction for Dr Gray's Hospital will be available from early 2023. More detailed scoping of proposed estates improvements and associated costs will follow, as will further understanding of the opportunities offered by a networked model beyond maternity services. A wider context for health and care services in Moray is below:

Moray Health and Social Care Context

The Moray Integration Joint Board carried out a Strategic Needs Assessment in 2018 looking at the future health and care needs of the population; that assessment produced the following highlights:

There are continuing inequalities in health status across Moray, with an evident association between level of neighbourhood affluence and morbidity and mortality.

The population is aging, with a growing population represented by adults over the age of 65, and growing numbers of adults over 80, with implications for increasing morbidity.

Significant demand for health and social care services arise from chronic disease and a growing proportion of the population is experiencing more than one condition (multi-morbidity).

Significant morbidity and mortality due to mental health problems.

Significant morbidity and mortality due to lifestyle exposures such as smoking, alcohol and drug misuse.

Moray is characterised as remote and rural, and there are significant access challenges for some in the population to access services.

Care activity is highly demanding of informal carers, and there is evidence of distress in the informal carer population.

Moray's military and veteran population constitute a significant group, requiring both general and specific health services.

Background

In March 2022, the Cabinet Secretary announced that consultant-led services will be delivered in Dr Gray's Hospital (DGH), Elgin and that until these services are fully available, a 'Moray Networked Model' should be put in place with networked services available by December 2023.

NHS Grampian and NHS Highland are committed to delivering a consultant led obstetric service at Dr Gray's Hospital through a networked approach. The two organisations are working collaboratively to plan and implement the necessary changes with our population, workforce and partners. The model will ensure that women in Moray have access to safe, high quality, fully supported maternity and neonatal services.

It is important to note that although 'Model 4' and 'Model 6' are set out in the Ralph Roberts Report (2021) as different models, they are, in effect, on a continuum of service development and planning for implementing these models reflects that. Many of the changes and conditions necessary for achieving the final model require to be phased in a way that prepares staff and services for full implementation. It should also be noted that service planning take place on a system wide basis, with impacts and benefits considered across the system. A summary of those benefits is set out below

Service Benefits	
Model Four	**Model Six**
Women are able to receive care at Dr Gray's, Aberdeen, or Raigmore Hospital	Consultant-led unit with midwifery-led maternity unit operating from Dr Gray's
Antenatal care delivered at Dr Gray's	This includes wrap-around support necessary to sustain an extended maternity service.
24-hour availability of Midwife-led triage and assessment at Dr Gray's	The unit will include all antenatal, intrapartum and postnatal services.
This will support reduced travel times for a majority of births	Women will be able to receive care at Elgin, Aberdeen, or Inverness
Midwife-led intrapartum care in Dr Gray's, offering the potential to provide approximately 20% of Moray births (all of these births would be those categorised as 'low risk')	A small number of women may still require, in the interests of the wellbeing of the mother and baby, to give birth in the tertiary obstetric unit in Aberdeen.
Access to planned consultant-led intrapartum care shared between Raigmore and Aberdeen Royal Infirmary as part of a 'network'	

Planning for those earlier stages of implementation has included the submission in the summer of 2022 of a joint plan, produced by NHS Highland and NHS Grampian, that set out milestones and timescales for Model 4. In addition, NHS Highland's Board have approved a capital business case for the refurbishment and upgrading of part of the maternity infrastructure at Raigmore Hospital to bring it to an acceptable standard.

While the joint plan is yet to be formally accepted by Scottish Government, NHS Grampian and NHS Highland are committed to delivering the Cabinet Secretary's instruction. Planning has continued for the further stages of the new models as well as in creating the necessary conditions and this is part of a single planning process. As well as beginning to clarify the financial requirements for future services, there have also been a number of collaborative events supporting the further development of relationships for clinicians across medicine and midwifery from Highland and Grampian.

It is acknowledged that the milestones and timescales contained in this document are ambitious. They reflect the commitment and 'can do' approach that is needed to

achieve the highly challenging aim set out by the Cabinet Secretary and they are predicated on a number of assumptions and caveats, including those inputs from partner organisations, workforce availability and the availability of sustainable funding sources.

The Ralph Roberts Report (2021) noted that communications and engagement efforts could have been better on the part of NHS Grampian and in 2022, efforts have been made to improve this including regular meetings with stakeholders, support to stakeholder groups and the appointment of a dedicated role for community engagement. Linked to these efforts, there needs to be an equal shift in how public conversations are conducted so that we can rebuild the confidence of Moray women and families in the services they access. The successful achievement of the actions in this plan will require the support and commitment of the executive, managerial and clinical staff across NHS Grampian and NHS Highland, the Scottish Government and all stakeholders. It will be essential to support all parties to work collaboratively to ensure the objectives are met.

Foundation Model 4

One of the cornerstones of developing a safe sustainable model through collaborative working is the consistent, time critical intrapartum transfer of women from the Community Maternity Unit in DGH to Raigmore Hospital. Since it is the quickest, shortest journey to accessing consultant-led care for these women, it is proposed that current challenges in midwifery staffing can be mitigated by the provision of a midwife from DGH to the Raigmore team, offering additional capacity while also enabling closer joint working.

Women being able to choose Raigmore Hospital as their place of birth is a milestone and feature of Model 4. However, we have heard how it represents challenges for the Raigmore clinical team's capacity to meet additional demand. It is therefore proposed that this should be rescheduled to early 2025 to align with completion of the building refurbishment work in Raigmore and further scoping of staffing levels to be agreed locally. Given that these choices are generally indicated early in pregnancy, this will ensure that when the option is made available to Moray women, any rapid surge in demand can be met.

A further recommendation for early implementation was the provision of elective caesarean sections. Detailed narrative regarding this has already been shared as part of the joint plan submitted in the summer. It sets out the safety challenges to achieve this provision but the local aspiration remains to be able to offer elective sections in DGH ahead of Model 6; in early 2025. This will be as a result of planned recruitment and training of additional peri-operative staff in 2024.

Modelling to better anticipate the levels of activity that can be expected with each service change is not straightforward and there has been a wide range of proposed data with subjective degrees of confidence. For Moray women, the choice of Raigmore for birth is multi factorial and will include the journey time to Inverness, the future availability of the new Baird Family Hospital in Aberdeen and other unknown, personal preferences and circumstances. Despite these challenges, work has been undertaken to model the likely level of activity across the north, based on a modelled increase from the current 19.5% to 30% of women choosing to give birth in DGH. The following table sets this out

Data from Jan 2021 – Dec 2021 (source Badgernet)		**Model if women choosing DGH increased to 30%**	
Total Births Moray (and Banff)	952	Total Births Moray (and Banff)	952
Births commenced in DGH CMU (19.5% of total births)	186	Births commenced in DGH CMU (30% of total births)	284
Intrapartum transfers from DGH (Aberdeen and Raigmore)	41	Intrapartum transfers from DGH (all to Raigmore)	64
Moray (and Banff) women transferred and giving birth in Raigmore	13	Moray (and Banff) women transferred and giving birth in Raigmore (1-2 TRANSFERS PER WEEK)	64
1.modelling uses local transfer rates *2.Women in some parts of Banff are looked after by midwives in the Moray teams*			

Final Model 6

The final target model, to which we are committed, and is the feature of planning work, is one in which there is a consultant-led unit with a complementary community maternity unit operating from DGH, providing all antenatal, intrapartum and postnatal services. This will mean that the women of Moray will have the option of a local consultant led birth, with only those women with specific clinical needs being recommended to give birth in the tertiary obstetric unit in Aberdeen.

It is acknowledged that many roles across the health sector in Scotland face shortages in workforce supply; this is particularly the case in the north of Scotland where lower population densities and smaller hospitals might seem to offer more limited career opportunities. In DGH specifically the lack of medical trainees meant that in 2018, the maternity service model had to change because of insufficient junior doctor cover. The challenge of workforce availability has not eased since 2018 and is likely to continue in the future. For the north of Scotland, service sustainability is therefore highly reliant on innovative and new ways of working that bridge traditional boundaries and Boards; through the development of networked models, offering specialist services and attracting the necessary specialist staff.

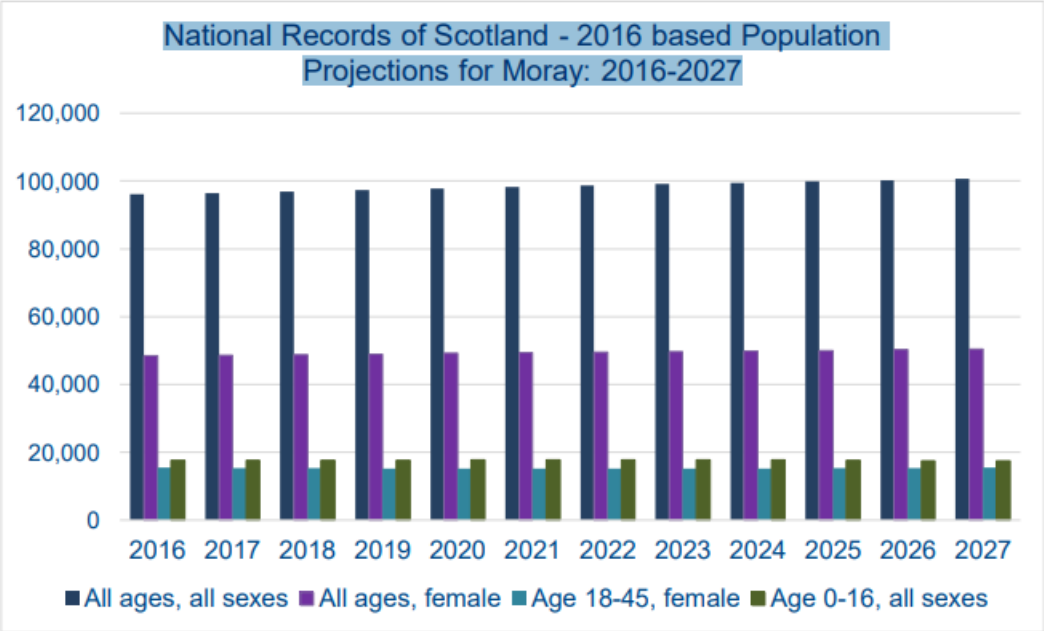
These new ways of working will take time to develop and embed and must reflect differences in culture, demand and activity levels, local practice and vicarious liability. It is also understood that these changes depend upon partner organisations being able to also make significant changes, i.e. sufficient levels of trainees to provide a safe and sustainable service; and recognised training programmes for new qualifications and national roles.

There is an eagerness to be able to provide the target model with the shortest delay, and despite the significant workforce challenges and other risks, it is proposed that consultant-led births could take place as early as the end of 2026 or early 2027. This is, of course, dependent upon NHS Education Scotland being in a position to supply a sufficient number of trainees to the north of Scotland.

Planning Assumptions and Principles

Planning for service provision and for service development takes account of a number of assumptions that provide the context for that planning. Key planning assumptions are set out here and help to establish a shared understanding of the objectives, of what is possible and what is yet to be fully scoped.

The following offers some insight into the Moray population, showing a small growth in the overall population but no increase among women aged 18-45. Planning is therefore on the basis of a static birth rate in Moray.



[20] This figure includes failed inductions
[21] Otherwise referred to as a "spontaneous cephalic" or "spontaneous vertex delivery" or SVD
[22] This record was changed to a mandatory field in the system from 2019 onwards

Further planning assumptions and principles are:

- Model 4 and Model 6, whilst offering different types of intrapartum care, are on a continuum of planning and service development, with the features of Model 4 as milestones on the journey.
- Clinical pathways already exist nationally for antenatal, intrapartum and postnatal care, our local work is to ensure these are shared and joined up across a network of care.
- Intrapartum transfers will be in place by early 2023.
- A networked model is the only sustainable approach to recruiting and retaining specialist and generalist workforce across the north of Scotland.
- Both models depend on clinical collaboration across a networked model, with workforces and pathways working jointly to support women and to mutual benefit across Boards and teams.
- Services will be delivered as close to home as possible and as specialist as necessary
- Capital and revenue funding will be available for Boards to develop and sustain new roles and services.
- Workforce numbers and associated resource requirements are not final and are subject to further review as the planning progresses.

People

This plan sets out the conditions necessary to implement the new models of care at DGH, and key to that is the people who will design, implement and deliver the services. While there is a clear need for non-clinical support staff, the following describes the need for new clinical roles and what services they will deliver. A summary of the additional posts is set out in the **Financial Plan at Appendix 2**. *(wte – whole time equivalent).*

Collaborative working and discussion to date has agreed that a joint approach to workforce planning is required to meet the challenges of recruiting and retaining the right people for these roles. Developing innovative roles working across traditional boundaries will be taken forward jointly by NHS Grampian and NHS Highland and this will be linked with the fresh approach to recruitment marketing described later in this plan.

Midwifery / Women's Health

Consistent practice around intrapartum transfers is a feature of Model 4 and is crucial to offering the shortest, quickest journey for those Moray women who need time critical obstetric input. Midwifery staffing levels in Raigmore have presented challenges to this pathway and it is proposed that a member of the DGH midwifery team is present on a daily basis to support colleagues in Raigmore Hospital and to support DGH colleagues to gain experience with a wider range of complexities. This service change can be achieved from June 2023 onwards and is sufficient resource to support the 1-2 transfers per week that might be expected if there was a shift from approx. 20% to 30% in women choosing to give birth in DGH as part of Model 4.

Also in 2023, DGH will benefit from enhanced midwifery leadership including 2wte Lead Midwives/Nurses, a consultant midwife and a specialist midwife. These roles will provide professional oversight and support as well as more specialist midwifery services including complex care needs, assessment and triage, early pregnancy care and bereavement. Further support will be offered via a dedicated Digital Midwife to ensure optimal use of digital modes and a new role in local senior service management will improve cohesion across women's pathways in DGH.

As part of full consultant-led obstetric services being available in DGH, a minimum of an additional 6.5wte midwives will be needed to support births. These roles would be based across the Moray service in line with the Best Start national programme.

Obstetrics / Medical

DGH currently has funding for 4wte consultants who provide services in both obstetrics and gynaecology.

As part of phasing and staging the workforce to match changes in the model, it is important that senior obstetric staff in DGH have exposure to a range of clinical scenarios, including those involving complexity in labour and birth, which will require some work outwith DGH. In addition to stabilising the current workforce with substantive appointments up to the establishment of 4wte, an additional 2wte

consultant obstetricians will be recruited. The new roles will operate across the network model and will ensure the enhanced antenatal provision that is part of Model 4; delivering a range of complex antenatal care including most fetal medicine services, and obstetric-supported day assessment and triage from DGH.

In order to ensure safe, sustainable consultant-led intrapartum care at DGH, there will also require to be a 24/7 resident tier of staff in DGH who can independently carry out emergency obstetric interventions including caesarean sections and assisted vaginal births. At the current stage of planning, it is anticipated that this will be a combination of medical trainees and non-training grade staff. There will also then require to be an increase in substantive obstetric consultants from 4wte to 6wte.

The paediatrics service will also require additional capacity as part of providing specialist care in Model 6; an additional 2wte Specialty Doctors and 2wte at a level of FY 1-2/GPST.

Anaesthetics

DGH operates with one of the smallest teams of anaesthetists in a Scottish district general hospital, with a consequence of high levels of on call and out of hours activity. A further 3wte posts will provide stability in the existing team, increase the attractiveness of the roles for new recruitment and enable the development of clinical practice and training needed for elective sections.

In order to provide the obstetric –led births in Model 6 within 3-4 years, it will be necessary to recruit up to 4wte additional middle grade anaesthetists with primary experience in obstetric anaesthesia and intensive care and 3wte anaesthetic speciality trainees. Once stabilised, the model could shift to a combination of middle grade anaesthetists (Speciality Doctors) and senior anaesthetic speciality trainees, with consultant anaesthetists providing an on call service from home to support resident anaesthetists out of hours.

Theatres

As part of providing obstetric led births in DGH, a dedicated theatre, available 24 hours for emergency obstetric usage is necessary. The costs for this will be more fully scoped as part of an Estates review, planned to take place in 2023 as part of the wider strategy work for DGH.

The majority of caesarean sections are uncomplicated, however, serious complications can occur without warning as with any major surgical procedure, and this means that the support services that are required to safely deliver planned caesarean sections are different to those that are available at the moment in DGH.

A robust tier of appropriately qualified staff will be required, resident 24 hours a day. The staff will be competent to provide routine post-operative care and to identify post-operative complications including supporting the midwifery staff with the initial resuscitation of a woman/neonate, while awaiting senior medical help or retrieval.

Sufficient anaesthetic assistants and other theatre staff are necessary to always allow safe and timely access to theatre for women who require it, for the management of bleeding or other surgical complications and for neonatal resuscitation.

Ranging from Band 3-6, the wte required for this cohort of staff is estimated at 22.13wte.

Recruitment Marketing

Recruitment across the NHS is a national challenge and this applies to the posts needed to implement the new models. There is also a stated need for more clarity about the role and function of the wider hospital and its place in Moray, Grampian, and the north of Scotland. In 2023, a strategic intent and delivery plan will be published, setting out a future direction for the hospital. This clarity and positivity is expected to benefit the recruitment position for DGH, as will a shift in tone about the hospital and services towards a more positive and optimistic future.

A blend of traditional and fresh recruitment tactics will aid the marketing of career opportunities in the north, including, of course, a focus on the natural beauty of the landscape and the lifestyle opportunities offered by the more rural locations. Targeted modern advertising campaigns including pop up events and media exposure will be combined with clinical partnering with the Royal Colleges and civic agencies will ensure an energetic approach to recruitment.

More detail is set out at **Appendix 3: Recruitment Marketing Plan**

Places and Equipment

Fit for purpose accommodation in hospitals and units across the north are vital to maternity service quality, accessibility and sustainability. A business case for upgrading and refurbishing maternity services accommodation is already approved by NHS Highland for Raigmore and Aberdeen Maternity Hospital will be replaced by the Baird Family Hospital by the spring of 2024. It is also noted that the theatre provision at DGH is fragile and in order to ensure availability for obstetric cases, including elective sections, a new dedicated theatre and associated equipment will be required. Scoping and production of a separate business case for this will be undertaken in 2023, as part of a wider Estates review. Costs for this are not included here. Similarly should forthcoming national guidance on neonatal care indicate a need for an upgraded Special Care Babies Unit (SCBU), associated costs will be calculated and shared,

Appropriate and modern equipment is also needed to support the changing models including that associated with cardiotocography and obstetric high dependency. These will need to be priced closer to the date of installation. Delivery of services as close to home as possible, and in particular for DGH to be able to provide the planned enhancements to the current ante-natal service, requires sonography equipment. This will mean that scanning appointments could be retained in Moray, rather than travelling to Aberdeen and to this end, NHS Grampian is scheduling the purchase of such equipment in early 2023.

Pathways

National clinical pathways for ante natal, intrapartum and post natal care already exist and are followed by territorial Boards, in line with national Best Start strategy. It is however always the case that pathways require adaptation to be implemented locally, taking account of factors such as workforce, skill mix, environment. These local guidelines will have minor differences across the different Board areas, however will still operate within safe parameters. Where women and families receive care across teams and local practice, clinical collaboration between teams in NHS Highland and NHS Grampian is already in place to reach accord on how these will join up, providing a seamless experience for women in the new models.

A major benefit of establishing the features of Model 4 in a Community Maternity Unit in DGH is that the skills and experience of the midwifery teams will continue to be available to those women who choose midwifery-led intrapartum care even after obstetric led services are available as part of Model 6.

Neonatal services were formerly delivered from a SCBU in DGH and as part of a consultant-led obstetric service, some babies would need additional care as part of Model 6. Nationally there is ongoing work to clarify the neonatal models recommended in Scottish hospitals as part of the Best Start national programme and this will inform and shape the future resource requirements for DGH. Should this guidance indicate a need for a SCBU model in DGH this will need to be scoped further, with crucial planning input from colleagues in ScotSTAR.

Interdependencies

Laboratory Services / Scottish National Blood Transfusion Service

DGH in recent years moved to the use of a Smart Blood Fridge, primarily to address longstanding issues around attracting, training and retaining appropriately HCPC registered scientific staff. This has proven successful, with other Board areas now following suit. This mode of provision is already sufficient for Model 4 and is also deemed to be appropriate service provision for elective sections when they become available in DGH. A fully risk-assessed Haemorrhage Protocol locally provides a higher level of transfusion service and is approved by Scottish National Blood Transfusion Service. (SNBTS)

As part of Model 6 and the provision of obstetric-led births in DGH, an increased level of activity may indicate a need for a subsequent increase in Smart Blood Fridge capacity. This will be supported centrally by SNBTS so may not require additional local workforce, but this will be scoped appropriately.

SAS/Scotstar

Hospital based teams and services work closely with colleagues in Scottish Ambulance Service (SAS) and ScotSTAR, and ongoing discussions have been a feature of planning since the publication of the Review Report in 2021. When

designing models of care that incorporate the challenges of intrapartum transfers across significant distances and across rural locations, there can be no service planning without including these services. Significant additional resource from Scottish Government into SAS/ScotSTAR and robust bypass policies will need to be considered as part of future planning.

With Model 6, staffing ambitions for potential neonatal care models will optimally consider the need for further partnership working with SAS to contribute to safe and sustainable ScotSTAR staffing, e.g. rotational nursing/practitioner posts, and sessional commitments from consultants. The requirement will be clearer with the national guidance on models referenced earlier on page 12.

NES – supply of middle grade trainee doctors

It has always been clear that any model of care offering consultant-led obstetric maternity services in DGH requires a stable rota of middle grade trainee doctors to be safe and sustainable; the lack of this workforce was a key factor in having to change the previous service in 2018. There will require to be significant change in the supply of trainees to DGH and the north of Scotland to effect this and this will take a number of years to plan. To this end, discussions have been taking place at an executive level between NHS Grampian and NHS Education Scotland to better understand what will be required and how it could be achieved. Discussions are ongoing and are likely to include colleagues from Scottish Government.

Risks

In 2022 a Joint Board was established as part of the approved governance structure; this Board is jointly chaired by senior leadership from NHS Highland and NHS Grampian. Risks have been reviewed and are owned by this group, and a summary of key risk areas is below.

Risk	Impact	Mitigation
Delays or inability to recruit to necessary roles	Aberdeen, Elgin and Inverness already holding vacancies across all disciplines, lack of additional recruitment would hinder deliverability of current and future services	• Fresh recruitment approach • Clear direction for DGH • Potential for joint roles as part of networked model
Inability to remove barriers to cross-Board working, e.g. vicarious liability, contracts, culture	lack of joint working prevents pathways i.e. deliverability of transfers, choice for women and networked model	• Joint Board governance • Joint planning • Clinical collaboration – formal and informal
Adequate level and timely availability of funding by Scottish Government	Delays in purchase of scanning equipment, recruitment to posts)	• Financial plan developed for additional resource required, with indication of scheduling

Recommended new roles e.g. Advance Midwifery Practitioner, without a national, recognised outline, development programme or training/qualification.	No recruitment possible to a role which has not been recognised	• Discussion with NES on potential for development programme
Delays in refurbishment programme at Raigmore Hospital	Delay in readiness and capacity for moving forward with redesign	• Project Management by NHS Highland expert team
NES and Professional Bodies not able to support increased number of trainees at FY1& 2 and ST 3 – 7 levels for Obstetrics, Anaesthetics and Paediatrics	Consultant-led services are not possible at all in DGH without this additional level of supply	• Planning discussions with NES underway at executive level.
Lack of recognition that future services require a networked model for the north	Recruitment and maintenance of specialist services in isolation in single Boards is likely unsustainable	• Discussion and development of networked model for maternity services and wider

Conclusion

We are pleased to be able to submit this plan as an indication of milestones and timescales for delivering Model 6; consultant-led obstetric services in Dr Gray's Hospital as part of a networked model.

It is acknowledged that many of these timescales have interdependencies and caveats linked to risks in workforce availability, finance and other areas; however the opportunity to redesign maternity services in Elgin can also be seen as an opportunity, and even a pathfinder, to reshape many healthcare services across the north of Scotland, where services are often vulnerable to operating in large areas with lower populations and delivered by smaller teams.

We do not underestimate the challenges ahead, nor the ambition of meeting the timescales set out in this plan. To meet those challenges we will need to, and look forward to, working with the support of all stakeholders; colleagues across territorial Boards, in Scottish Government and partner agencies and public and political stakeholders too.

We look forward also to hearing feedback on this Joint Model 6 Plan.

Appendix 1. *Visual Model of Proposed Milestones and Timescales*
Appendix 2*. Financial Plan (NHS Grampian)*

Appendix 1. Proposed Milestones and Timescales Visual

	Moray Maternity Services Model 6 Milestones and Timescales							
	2023		**2024**		**2025**		**2026**	
	Jan-Jun	**Jul-Dec**	**Jan-Jun**	**Jul-Dec**	**Jan-Jun**	**Jul-Dec**	**Jan-Jun**	**Jul-Dec**
People	1 x NHSG midwife on shift at Raigmore				11 x SCBU Band 4-6	Paediatrics 2 x Spec Doctors, 2 x FY1-2/GPST		
	6.5 WTE Midwives (Band 6)						Anaesthetics 7 x ST4-7 medical trainees or equivalent	
	3 x anaesthetic consultants		Theatre Team 22.1 x B3-6				Obstetrics 7 x ST3-7 medical trainees or equivalent	
	2 x 8b Lead Midwife		5.4 x B7 Neonatal Advanced Nurse Practitioners					
	1x 8b Cons Midwife							
	1 x B7 o/p Midwife							
	2 x substantive obstetrician roles to advert							

	2 x obstetrician roles to advert (Increased complex antenatal care)							
	1 x Unit Operational Manager (Band8C)							
	Training Analysis jointly undertaken with NES (obstetricians, paediatricians, peri-operatives, anaesthetists, midwives, nurses)		NES commissioned programmes in place ready to run					
Places	New scanners	New scanners in place and training completed	New Obstetric Theatre Business Case			Commence build of new Obstetric Theatre		
			Raigmore Hospital refurbishment complete					
Pathways	**Intrapartum transfers of time critical Moray women to Raigmore in place**	BTS scoping for any additional resource		BTS model in place	**Elective Sections (2 lists per week)**			

		Enhanced complex antenatal care; consultant led triage and day assessment			**Moray women can choose Raigmore for consultant led birth**			**Consultant led births in DGH**
		SCBU model to be scoped				SCBU upgrades made		

Moray Maternity Services Model 4 - 6
NHS Grampian Draft Finance Plan

As part of the Cabinet Secretary's announcement regarding the establishment of Consultant-Led Obstetric services at Dr Gray's Hospital, there was confirmation of funds of £5million to be made available to NHS Grampian to support planning and implementation.

A Draft Joint Plan has already been prepared for delivering Model 4, the foundation destination ahead of Model 6, and this was submitted to the Cabinet Secretary for his review on 1 July 2022.

The following has been identified to date as the costs for NHS Grampian to begin to progress to Model 4 and to establish a stable foundation for developing and implementing Model 6. As progress is made in developing the Model 6 planning, further recurring and non-recurring costs will become evident including multidisciplinary development and infrastructure and the potential need to recruit via locum staff. This will be submitted at a later date. Additionally, NHS Highland colleagues have prepared a separate Full Business Case regarding the local infrastructure requirements at Raigmore Hospital which has been approved by the NHS Highland Board.

The table below includes the resource that will be required to support the Programme approach for planning and implementation of the new models, working within local and joint governance structures between NHS Grampian and NHS Highland (Joint Maternity Board), within the scope of the Integrated Family Portfolio and Moray Portfolio.

It is important to note that women from Moray utilise maternity services across the whole of Grampian and wider North of Scotland therefore current additionality will enhance the quality of care experienced by Moray women as well as the whole pregnant population in Grampian and some women in the wider North of Scotland.

MORAY MATERNITY PLAN COSTINGS						
Staff Group	**WTE**	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27**
	For Model 6	£	£	£	£	£
Midwifery / Nursing	60.8	343,851	1,869,871	2,873,730	3,379,823	3,479,118
Medical	24.4	223,634	921,369	949,010	1,604,062	2,858,297
Programme Support & Non Clinical	8.1	233,948	638,066	630,858	649,183	668,059
Equipment		260,000	26,000	26,000	26,000	26,000
Total Cost year by year	**93.3**	**1,061,433**	**3,455,306**	**4,479,598**	**5,659,068**	**7,031,474**
Additional Investment Required By Year		***1,061,433***	***2,393,873***	***1,024,292***	***1,179,470***	***1,372,406***

Appendix 3: Recruitment Marketing Plan

Recruitment Marketing (Maternity Services) Draft 1.

'Wish You Worked Here?' Pilot Campaign

Situation Analysis

Maternity Services in NHS Grampian and NHS Highland are undergoing a period of development that requires additional staffing across a number of clinical specialisms in order to support future ambitions.

A networked model of maternity care, followed by a full obstetric service based in Moray is being developed in partnership by clinical teams in Elgin (Dr Gray's Hospital), Aberdeen (AMH) and Inverness (Raigmore Hospital) with oversight from Scottish Government.

This will deliver enhanced antenatal services, reduce travel time for mothers throughout their pregnancy and ultimately a safe and sustainable model of care that has a midwifery led unit in Moray alongside a consultant led unit - placing local needs at the heart of a wider and changing health system.

A Competitive Landscape

Recruiting NHS staff across Scotland remains challenging and across the UK there is a significant shortage of clinicians with those skills being sought. Whilst this is evident across a number of specialisms, the shortage includes those relevant to posts required to support Maternity Services in the North of Scotland, namely; midwives, neo-natal Advanced Nurse Practitioners, Consultant Obstetricians and Anaesthetists.

(See: The Anaesthetic Workforce: UK State of the Nation Report | The Royal College of Anaesthetists (rcoa.ac.uk)

Goals/Objectives

Joint plans have been submitted to the Scottish Government by NHS Grampian and NHS Highland describing the necessary upgrades to infrastructure at Raigmore Hospital as well as workforce requirements in both NHS Grampian and NHS Highland to enable delivery of the desired developments to Maternity Services.

For the safe and sustainable introduction of consultant-led maternity unit at Dr Gray's Hospital, included within the plans submitted to the Scottish Government are specific recruitment milestones.

In context of a challenging recruiting environment, it will be necessary for NHS Grampian to undertake a marketing campaign that will attract much greater visibility than traditional recruitment tactics deliver in order to attract the workforce required. Therefore our intention is to promote Moray, Grampian and the North of Scotland as an excellent location to live and work in more and different environments, as a means of drawing more attention to the positions that are available. By promoting what we believe to be a uniquely attractive set of criteria NHS Grampian intends to generate increased interest in current roles, as well as starting a conversation that will prime others for future rounds of recruitment.

Note: it is acknowledged that successful recruitment is interdependent upon a clear strategic direction for Dr Gray's Hospital (anticipated to be available from early 2023) and a shift in tone about the hospital and services (towards a more positive and optimistic future) if 'interest' is to be converted into applications and ultimately appointments.

Marketing Strategy

Activity will commence in Q1 2023, supporting the recruitment need set out within the Model 6 timeline. Campaign content will consist of a number of pilot phases that use fresh techniques to extend the reach of the Health Board to a broader audiences using new mediums. A pilot approach has been selected because the blend of traditional and fresh recruitment tactics that will be employed. This offers us the ability to adapt following performance measurement and scaled-up/down as required.

<u>Advertising</u>

Supplementary to traditional recruitment (job role) advertising within key clinical journals and relevant health publications, a 'Wish You Worked Here?' lifestyle campaign will be designed for deployment across these titles to create stand-out by promoting the wider benefits of living as well as working in Moray. A promotional film will also be commissioned supporting this theme, for use in a variety of forums including recruitment fairs, social media and specific event (see below).

<u>Partnering</u>

Clinical partnering - Opportunities to partner with specific bodies relevant to our recruitment needs will be incorporated into activity. Organisations including: The Royal College of Obstetricians and Gynaecologists, Royal College of Midwives and The Royal College of Anaesthetists will be approached to identify opportunities for direct marketing to their memberships, availability of editorial space within their respective newsletters/journals and promotional opportunities on websites and within their training literature.

Wider partnering – Opportunities to partner with less obvious but partners relevant to the lifestyle aspects of our campaign will also be incorporated into activity. Visit Scotland, Visit Aberdeenshire, Sustrans and Cycling UK are among those under consideration given the natural linkage between people who are already familiar with/planning a visit to the region for pleasure but may consider a more permanent stay.

Events

Pop-up exhibition stands using the 'Wish You Worked Here?' campaign branding will be created for deployment at specific clinical events, as well as for roll-out to high-footfall locations. These stands will be staffed by Comms, HR and (where appropriate) clinical colleagues - support face-to-face interaction and offering greater engagement than can be achieved through digital alone. Using a variety of locations also enables us to target the right clinical specialisms being recruited to, whilst generating wider attention/media exposure and reaching a mass audience to raise awareness of NHS Grampian.

Clinical events currently being considered for face-to-face engagement activity include:

- The Royal College of Obstetricians and Gynaecologists - World Congress 2023, 3-5 May, London
- The Royal College of Anaesthetists - Anaesthesia 2023 (Annual Conference), 16-18 May 2023, Birmingham
- Royal College of Midwives - Education and research conference 28 - 29 March 2023, Birmingham
-

Wider locations being considered for face-to-face engagement activity include major railway stations and wider leisure/travel shows in partnership with Visit Aberdeenshire.

Radio Day

UK radio stations attract over 48 million listeners per week are an efficient way to reach a mass audience. Every day radio stations are looking for interesting and engaging content for news bulletins and programming, therefore a newsworthy 'hook' will be created in keeping with our Wish You Worked Here? campaign and used to secure broadcast coverage promoting NHS Grampian, Moray and the North of Scotland as a place to live and work, across both regional and national radio stations.

Resources/Budget & Plans

Anticipated spend for the campaign as outlined is £65,000. This will be drawn from the £5million commitment from the Scottish Government that has been promised to NHS Grampian to support the development of a consultant-led maternity unit at Dr Gray's.

Context: Investing in recruitment is essential given the challenging recruitment landscape as described and current financial pressures. NHS Grampian's pay budget for medical staffing was overspent by £6.02 million (6.2%) at the end of October. A significant factor driving these costs within the areas of Aberdeen Royal Infirmary, Dr Gray's Hospital and Mental Health is the continued use of expensive agency locums. Locum expenditure for the year to date (excluding IJBs) is £7.4 million (23% higher than the same period last year). October 2022 saw locum spend of £1.2 million.

- Advertising £12,000 *(including production of promotional film)*
- Partnering £18,000
- Events £25,000 *(including production of stand, supporting promotional materials and venue hire/fees)*
- Radio Day £10,000 *(including coverage on circa 10-15 major stations)*

  Total: £65,000

Timing

- January-March Campaign development
- March-April Advertising & Radio Day
- April-June Partnering activity & Events

Note: Above timings are dependent upon availability of the £5million funding allocation during Q1 2023 and posts being recruited to going live on schedule.

AMU SHIFTS within existing maty unit footprint

Senior Charge Nurse/Midwife/Team Lead

Band 6

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Number of hrs included within shift	Total Hrs	WTE	WTE (INC22.5%)
Long Day	1	1	1	1	1	1	1	12	84	2.24	2.74
Short Day Early									0	0.00	0.00
Short Day Late									0	0.00	0.00
Night Shift	1	1	1	1	1	1	1	12	84	2.24	2.74
TOTAL											5.49

Registered Nurse/Midwife

Band 4

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Total Hrs	WTE	WTE (INC22.5%)
Long Day	1	1	1	1	1	1	1	12	84	2.24	2.74
Short Day Early									0	0.00	0.00
Short Day Late									0	0.00	0.00
Night Shift	1	1	1	1	1	1	1	12	84	2.24	2.74
Twilight									0	0.00	0.00
TOTAL											5.49

HCSW (N.B. If you have a Housekeeper role that is part of your current funded establishment, please include)

Band 3

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Total Hrs	WTE	WTE (INC22.5%)
Long Day	1	1	1	1	1	1	1	12	84	2.24	2.74
Short Day Early									0	0.00	0.00
Short Day Late									0	0.00	0.00
Night Shift	1	1	1	1	1	1	1	12	84	2.24	2.74
Twilight									0	0.00	0.00
TOTAL											5.49

Paediatric Shifts - Raigmore Neonatal Unit

Future Tier 1 ANNP ST1-3

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Number of hrs included within shift	Total Hrs	WTE	WTE (INC22.5%)
Long Day	1	1	1	1	1			12	60.0	1.6	2.0
Short Day Early						1	1	5	10.0	0.3	0.3
Short Day Late	1	1	1	1	1			4.5	22.5	0.6	0.7
Night Shift									0.0	0.0	0.0
TOTAL											3.0

Future Specialty Doctor

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Total Hrs	WTE	WTE (INC22.5%)
Long Day	1	1	1	1	1			12	60.0	1.6	2.0
Short Day Early						1	1	7.5	15.0	0.4	0.5
Short Day Late	1	1	1	1	1			4	20.0	0.5	0.7
Night Shift									0.0	0.0	0.0
Twilight									0.0	0.0	0.0
TOTAL											3.1

Future Consultant (will include clinics)

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Total Hrs	WTE	WTE (INC22.5%)
Day	1	1	1	1	1			8.5	42.5	1.1	1.4
Short Day Early									0.0	0.0	0.0
Short Day Late									0.0	0.0	0.0
Night Shift	1	1	1	1	1			16	80.0	2.1	2.6
Twilight									0.0	0.0	0.0
TOTAL											4.0

Obs/Gynae Shifts - Raigmore Maternity Unit

Future Tier 1 ST1-3

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Number of hrs included within shift	Total Hrs	WTE	WTE (INC22.5%)
Long Day									0.0	0.0	0.0
Short Day Early (Theatre Support)	1	1	1	1	1			9	45.0	1.2	1.5
Short Day Late									0.0	0.0	0.0
Night Shift									0.0	0.0	0.0
TOTAL											1.5

Future Specialty Doctor

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Total Hrs	WTE	WTE (INC22.5%)
Long Day	1	1	1	1	1			12	60.0	1.6	2.0
Short Day Early						1	1	7	14.0	0.4	0.5
Short Day Late	1	1	1	1	1			5	25.0	0.7	0.8
Night Shift									0.0	0.0	0.0
Twilight									0.0	0.0	0.0
TOTAL											3.2

Future Consultant (will include clinics)

Shift Type	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Total Hrs	WTE	WTE (INC22.5%)
Day	2	2	2	2	2			9	90.0	2.4	3.0
Short Day Early									0.0	0.0	0.0
Short Day Late									0.0	0.0	0.0
Night Shift									0.0	0.0	0.0
Twilight									0.0	0.0	0.0
TOTAL											3.0