

**STANDARD BUSINESS CASE
FOR
NATIONAL TREATMENT CENTRE
GRAMPIAN (NTC-G)
MRI
DR GRAY'S HOSPITAL, ELGIN**

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Introduction to the Standard Business Case

This Business Case for the National Treatment Centre MRI at Dr Gray's Hospital in Elgin provides the information to demonstrate to the NHS Grampian Board that the project is;

- ready to proceed to the detailed design,
- meets the business need,
- offers value for money, is affordable and achievable (addendum to Business Case will be taken back to a future Board meeting for final agreement on price and programme prior to proceeding to construction),
- contributes to the Scottish Government's objectives.

NHS Grampian, in response to the Scottish Government allocation of capital funding for the development of National Treatment Centres in Scotland, has identified, through a process of broad engagement and clinically led discussions, those services that would benefit most from transformation, an opportunity to provide additionality in clinical service, and would realise all opportunities arising from investment. Radiology is one of these key clinical services and an increase in imaging capacity has been approved.

Radiology performs as a pivotal enabler to support the highest standards of care to be delivered at all stages of referral, assessment, diagnosis, treatment and recovery. Radiology, as a key clinical service will facilitate transformation in planned care and a programme of redesign aimed at improving access, delivering additionality, and at driving efficiency to meet anticipated need and demand for treatment in the future. Locating one of the two NHS G National Treatment Centre MRI facilities in Dr Gray's Hospital Elgin, is a recognition of the importance of placing Communities at the centre of what NHS Grampian does. The investment in Dr Gray's Hospital, Elgin will support not only an enhancement of the existing Radiology department and opportunity for development of existing and recruitment of new team members, but at a wider level, this investment also represents improvement in the places where people live and tackles the issues that matter to them, with the expansion of specialist services available locally. A purpose built facility, designed to jointly optimise the patient experience and clinical service represents a vibrant opportunity in supporting population health. The investment in Dr Gray's Hospital, Elgin supports the key strategic commitment as described under People, Places and Pathways within the "Plan for the Future".

The Initial Agreement (approved in September 2018) and Outline Business Case (approved in September 2019) by Scottish Government Health and Social Care Department Capital Investment Group, confirmed provision for General Radiological Imaging, Computed Tomography (CT) and 2 (no.) Magnetic Resonance (MRI) in the NHS Grampian National Treatment Centre. Whilst option appraisal work is currently progressing for the NHS G National Treatment Centre within Aberdeen /Aberdeenshire, the second MRI facility to be established at Dr Gray's Hospital in Elgin has been given approval by the Scottish Government with a requirement for development of a stand-alone Standard Business Case for submission to NHS Grampian Board.

This is the Business Case for the National Treatment Centre MRI at Dr Gray's Hospital in Elgin.

This Business Case sets out the governance arrangements for the National Treatment Centre NHS G MRI at Dr Gray's Hospital, Elgin project, and the intended programme for procurement.

There are six main sections as summarised below:

Executive Summary – provides a clear, concise summary of the key features of the business case:

This Standard Business Case (SBC) is for the National Treatment Centre – Grampian (NTC-G) MRI Dr Gray's Hospital, Elgin.

Investment in this new facility and service is a key component of the preferred way forward in the Outline Business Case (OBC) for the NTC Grampian. The Dr Gray's Hospital NTC MRI is being delivered as a separate (stand-alone) Standard Business Case (SBC) following agreement with the Scottish Government. The delegated limits for approval of capital investment in projects for NHS Grampian is £10 million and it is on that basis approval is sought. This Standard Business Case (SBC) is requesting designated approval to proceed with the project, with full costs and design to be provided in an addendum paper to a future NHS Grampian Board meeting.

The Strategic Case – establishes the rationale and objectives for intervention, confirms that the rationale is still valid, confirms that the preferred option will offer solution(s) to the identified problem(s) and satisfies the Project's specific and Government objectives:

The new MRI facility at Dr Gray's Hospital, Elgin, will facilitate transformation in planned care, which has been underpinned by a programme of redesign aimed at improving access, delivering additionality and driving efficiency in Radiology as a key clinical service.

NHS Grampian has an aspiration to be a high achieving Anchor Institution in the north-east of Scotland and the Dr Gray's Hospital National Treatment Centre Grampian (NTC-G) MRI is aligned to this strategic position, and supportive of the NHS Grampian "Plan for the Future". Additional MRI facilities are required to respond to NHS Grampian's predicted additional diagnostic need. Provision of part of the MRI service at Dr Gray's Hospital, Elgin has a geographical advantage and provides care closer to the Moray and rural communities

The Economic Case – documents the range of options that have been considered and provides information on the economic appraisal:

Investment in a National Treatment Centre MRI facility at Dr Gray's Hospital was identified as a key component of the preferred way forward in the OBC for the NTC Grampian. A short list of physical solutions has subsequently been appraised to support a stand-alone Standard Business Case (SBC);

- Option A – (Reference design) New build adjacent and connecting to existing DGH Radiology department
- Option B – Amended Floorplan (reduction in SOA, M&E value engineered changes, changes to build materials)
- Option C – Modular Solution
- Option D – Mobile Solution

An appraisal of the costs, risks and benefits associated with the site options identified has been revisited since the OBC. The conclusions from the Economic Case are taken forward in the Financial Case to determine overall affordability.

The Commercial Case – documents the procurement strategy and risks. Outlines preparation and arrangements for the construction contract:

The Project is a health project with an investment cost in excess of £5 million. It forms part of a programme of National Treatment Centre developments which are planned to be funded by means of a SG capital budget allocation and procured under the NHS Scotland Frameworks Scotland 2 (FS2) arrangement.

An addendum to the Standard Business Case (SBC) will be taken to a future Board meeting for final agreement on price and programme prior to proceeding to construction.

The Financial Case – ascertains cost and funding options, requirements and implications:

The Financial Case considers the overall affordability of the preferred option both in the context of the Board's financial plans, Scottish Government (SG) additional funding and in comparison to the short-listed options. The Project Team and Stakeholders recognise that Capital Funding for the National Treatment Centre Program, of which the Dr Gray's MRI Facility is part of, is limited. Objectively, Option B delivers all of the important benefits at a lower cost than the slightly larger Facility of Option A.

As a result of this, further development of Options A/B has been undertaken since the Option scoring exercise in 2021, including a Value Engineering review. A hybrid Option has emerged, incorporating elements of both Option A and B (at a lower cost to Option A, taking recent construction inflation into account) and this development has been designated 'Option E'.

Option E is the preferred option which will see a newly constructed MRI building which will attract additional running costs and a new Clinical Service which will attract additional Staffing and non- pay costs.

The Board is planning for and managing these. External review of workforce planning numbers is under continuing close scrutiny, drawing on expertise from other National Treatment Centres across Scotland. This scrutiny process will be finalised and workforce numbers will be provided in the SBC addendum

An addendum to the Standard Business Case (SBC) will be taken to a future Board meeting for final agreement on price and programme prior to proceeding to construction.

The Management Case – outlines the Project's management plan for successful delivery, including identification of the delivery team and the Project governance arrangements:

The National Treatment Centre Grampian project management structure and governance arrangement remain the same as outlined within the OBC.

The overarching governance arrangement for the National Treatment Centre MRI at Dr Gray's Hospital, Elgin project has been enhanced and consolidates key Dr Gray's Hospital operational representation and leadership.

Links are made via Dr Gray's Senior Team with:

- Moray Transformation Team
- Dr Gray's Senior Staff Committee and Clinical Forum
- Communication strategy and public and patient engagement
- Dr Gray's Hospital Infrastructure Group

Agreed project management approaches will be followed, reporting into NHSG management structures to provide assurance to the NTC Project Board and NHSG Asset Management Group.

1.0 Executive Summary

1.1 Introduction

NHS Grampian, in response to the Scottish Government allocation of capital funding for the development of National Treatment Centres in Scotland, undertook a broad clinical engagement with 22 clinical services, including Primary Care to ensure that the funding is targeted as effectively as possible. The process developed a clear strategic context for transformation in elective care and a programme of redesign aimed at driving efficiency and the delivery of “additionality” to meet anticipated need and demand for treatment.

A preferred service solution was developed in the Initial Agreement, and identified the services that can most effectively benefit from capital investment as part of a longer term programme. The Initial Assessment (IA) was approved by Scottish Government Health and Social Care Department on 26 September 2018 and no specific conditions were outlined in the approval letter. The Outline Business Case described the development of the National Treatment Centre in Aberdeen, with increase in Imaging capacity at Dr Gray’s Hospital, Elgin. This business case is specifically related to the National Treatment Centre MRI at Dr Gray’s Hospital, Elgin.

1.2 The Case for Change

The vision for the National Treatment Centre programmes is to deliver treatment and care as close to home as possible through application of best practice, innovation, sustainable practices and digital technology. Where treatment requires specialist skills and technology, this will be undertaken in purpose-designed facilities which promote efficiency, additional resource and excellent patient experience. The strategic direction of NHSG is to improve and transform services to meet anticipated need and demand for treatment in the future. The Dr Gray’s MRI service in Elgin will deliver high quality care in the right place, and provide safer, more effective and sustainable care. This represents an investment decision on services, staff and facilities which is supported by coherent NHS Grampian Health Board planning which enhances those services that will benefit most from transformation, and will deliver additional clinical service. The new National Treatment Centre Grampian (NTC-G) – Dr Gray’s Hospital MRI also supports key strategic commitments as described within the NHS Grampian “Plan for the Future, 2022 – 2028”.

The Radiology Service should manage demand and predicted challenges including advances in technology, changes in clinical practice, guidelines leading to increased imaging requirements, workforce and financial challenges, increases / changes in population, developments around Artificial Intelligence. In-depth analysis of the current position of all aspects of the service must be fully articulated, so that clarity and vision can support informed and co-ordinated decision making.

Specific attention will also be given to re-mobilisation following the COVID 19 Pandemic, shared learning from all modalities and clinical specialties, and the impact on future service delivery models.

1.3 Why is the proposal a good thing to do – Need for change.

Radiology is an enabler of delivery of high standards of care to be delivered at all stages of referral, assessment, diagnosis, treatment, and recovery. As a key clinical service, it will facilitate transformation in planned care and a programme of redesign aimed at improving access, delivering additionality, and at driving efficiency to meet anticipated need and demand for treatment in the future.

Additional MRI facilities are required to respond to Grampian's predicted additional diagnostic need. Provision of part of the MRI service at Dr Gray's in Elgin has a geographical advantage and provides care closer to the Moray and rural communities

Additional MRI capacity for NHSG is provided by mobile MRI vans where just over 6800 patients were scanned in 2021. The MRI scanner at DGH would provide approximately 35% in-house capacity for MRI scans currently undertaken on the mobile vans. Planning around future MRI service is ultimately seeking to have fully resilient NHSG MRI services. The expansion of MRI through the establishment of the new service at Dr Gray's Hospital Elgin, will not of itself, enable a reduction in use of third party mobile MRI services, as a result of current pressures on service and recovery from the Covid pandemic. However, the 2nd NTC MRI Scanner and other strategic developments such as a MRI scanner in the Baird Family Hospital, will support a resilient and sustainable MRI service, which will allow NHS Grampian to have less reliance on 3rd party mobile MRI services going forward.

Figures pre-Covid pandemic showed that just over 2,300 patients scanned for MRI were from the DGH Elgin catchment area. The new MRI facility should initially match demand, and a locally based MRI service will have significant value for both the local Moray and West Grampian population. It is anticipated that patients from the geographic areas as far west /south as Inverurie will be offered the opportunity to have their MRI scan undertaken at the new NTC Dr Gray's Hospital MRI service. The facility has been planned and located to meet demand, and is part of a wider strategy around embedding a resilient and future-proofed clinical service.

The investment in Dr Gray's Hospital, Elgin will support both an enhancement of the existing Radiology department and an opportunity for development of existing and recruitment of new team members. At a wider level, this investment also represents improvement in the places where people live and tackles the issues that matter to them, with the expansion of specialist services available locally. A purpose-built facility, designed to optimise patient experience and clinical service represents a vibrant opportunity to support population health, and is supportive of many of the central themes in the NHS Grampian "Plan for the Future" around people, places and pathways.

1.4 Investment Objectives

At present, there is no MRI service at Dr Gray's Hospital or in Elgin. The service is currently provided by MRI scanners in Aberdeen city. Due to the geography of NHS Grampian, patients may currently require to travel large distances to access this diagnostic service. Current capacity is limited by equipment and workforce availability in Aberdeen. Projected trends show an increase in demand for access to MRI from now to 2035. The expansion will ensure that we can meet future demand and enable us to continue to develop and implement innovative models of diagnostic service delivery and efficient patient flow.

In Scotland, demand for complex imaging such as MRI examinations has increased by 30% from 2014-2019 (SRTP 2021) with the Royal College of Radiologists predicting that this trend is likely to continue.

In NHS Grampian the demand on MRI services has seen the number of referrals on the MRI waiting list at month end grow from 1,000 in January 2015, to 1,506 in January 2018, and 3,255 at end of 2021. This rising demand will impact on waiting lists, which will continue to rise until either demand is modified or capacity is increased. This reflects the national picture for radiology services where the percentage of patients waiting over 13 weeks has increased from 8.8% (7,967 patients, 30th September 2021) to 15.8% (16,961 patients, 31st December 2021) (Public Health Scotland 2022). The proposed activity of investment in an MRI Facility and associated workforce at Dr Gray's Hospital will be a key enabler for the Health Board to meet the additional capacity required to meet future elective care MRI diagnostic demand.

1.5 What is the preferred solution.

The new MRI facility at Dr Gray's Hospital will physically connect to the existing Radiology department and will benefit from sharing support services and infrastructure (reception, patient main waiting area, toilets and access to main hospital food and beverage facilities) which are currently in place. The design (Image 1.5.1) has been developed with involvement with, and review and discussion by clinical stakeholders based at both Dr Gray's Hospital and Aberdeen Royal Infirmary. Based on the service operating 8 hours per day, 5 days per week, when fully operational, the MRI facility is expected to deliver:

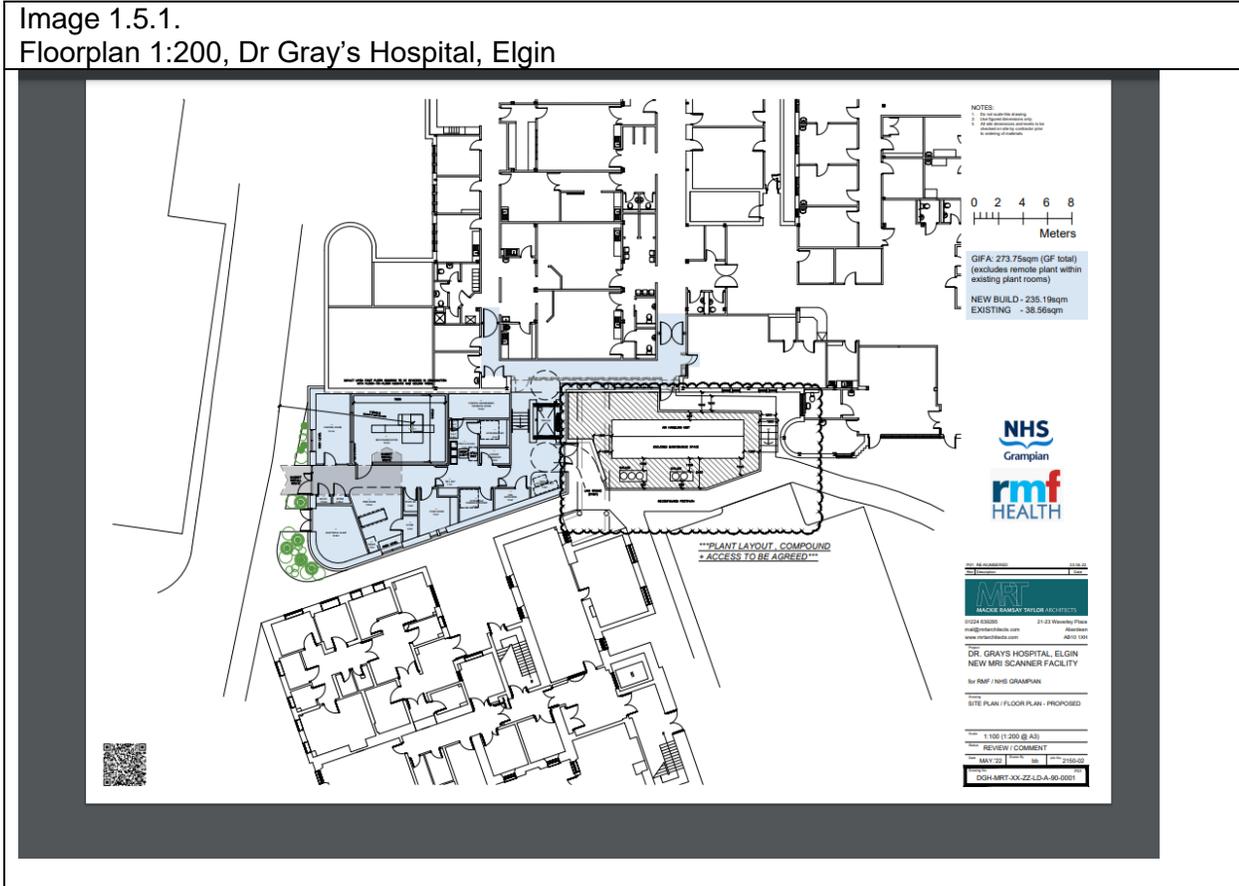
- An average of 45 minutes per scan per day, based on 10 patients scanned per 8-hour day (RCR 2017)
- An average of 2,400 additional scans per annum (90% capacity assumption), representing a significant improvement in capacity and ability to meet MRI demand.

The physical solution which has been approved comprises of 12 clinically focused rooms, of 273.75 m², which has been designed around the patient journey. This includes initial presentation, where essential clinical and safety checks are carried out, and different Zones 2, 3 and 4 of the MRI facility, with Zone 4 being the physical area where the MRI scanner is located.

The new additional MRI service at Dr Gray's Hospital will attract additional staffing (10.8 whole time equivalent), providing a diagnostic service to patients west of Grampian. Detailed planning has been progressed around the clinical cohort of patients who will be offered their MRI scan at Dr Gray's Hospital.

In developing this detail around the service and how it will be delivered, comprehensive discussions around patient pathways and the necessary staffing compliment and skill mix to deliver this service, have been undertaken.

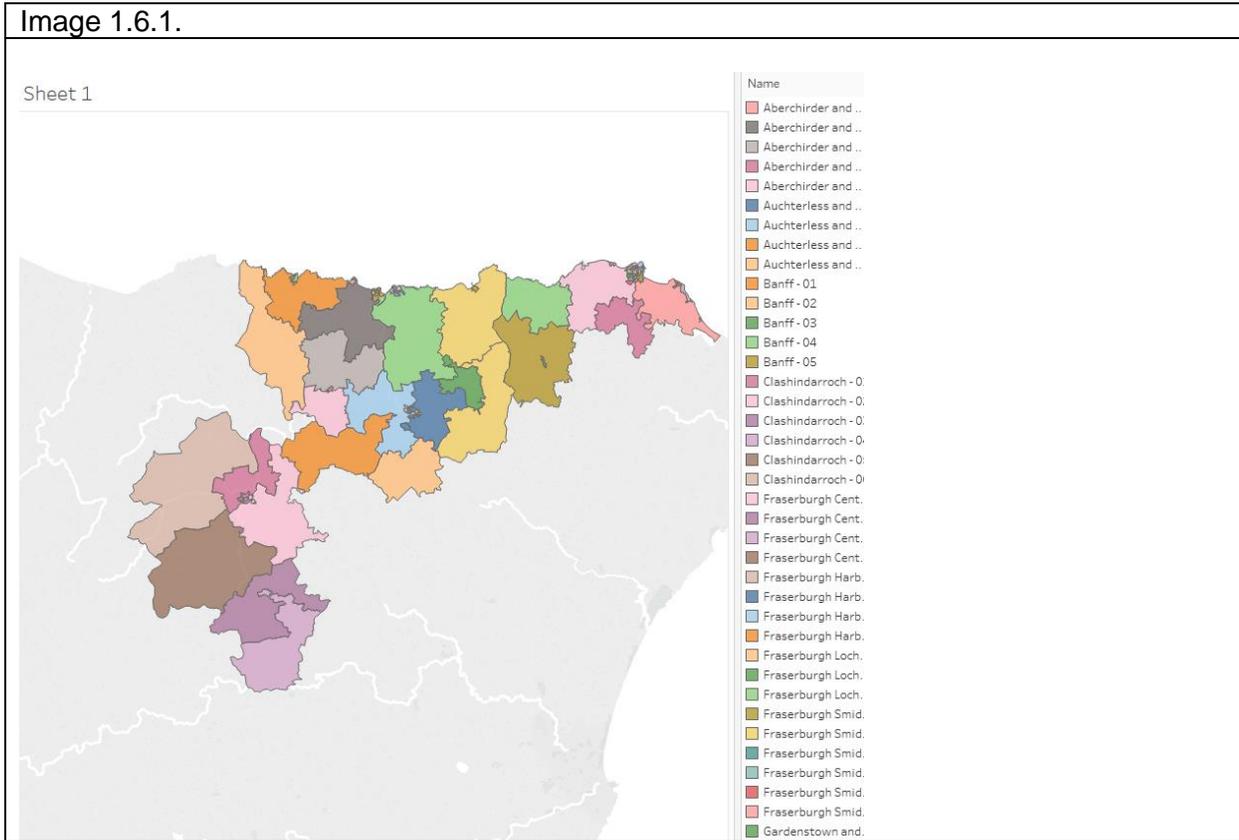
Image 1.5.1.
 Floorplan 1:200, Dr Gray's Hospital, Elgin



1.6 Is the organisation ready to proceed with the proposal

The need for additional planned care MRI provision to cope with the increase in demand over the period to 2035 has been well rehearsed and remains unchanged. Analysis (Image 1.6.1) shows that demand from the west of Grampian is adequate to ensure that the Dr Gray's Hospital NTC MRI facility would be operated optimally to provide an elective service, thereby preventing the people from Moray and West Grampian making the up to 150 mile round trip to Aberdeen each time they are referred for a MRI. NHS Grampian is ready to proceed with this proposal and this development was identified as a key component of the preferred way forward in the OBC for the NTC Grampian. This will be delivered and operational earlier in advance of the wider NTC Aberdeen Centre.

Image 1.6.1.



1.7 Is this proposal still important

The vision for the National Treatment Centre Grampian is to deliver treatment and care as close to home as possible through application of best practice, innovation and digital technology and in a sustainable environment. Where treatment requires specialist skills and technology this will be undertaken in purpose designed facilities which will promote efficiency and the best patient experience possible. The new MRI facility to be located at Dr Gray’s Hospital Elgin supports all of these strategic objectives, and has considerable importance for the Health Board in delivery of optimal healthcare services for the population of Grampian.

1.8 Final Price, Programme and Commercial Arrangement

The Project is a health project with an investment cost in excel of £5.5million. It forms part of a programme of National Treatment Centre developments which are planned to be funded by means of a SG capital budget allocation and procured under the NHS Scotland Frameworks Scotland 2 (FS2) arrangement. An addendum to the Standard Business Case (SBC) will be prepared reflecting final arrangements on funding, costs and programme prior to proceeding to construction.

2.0 Strategic Case

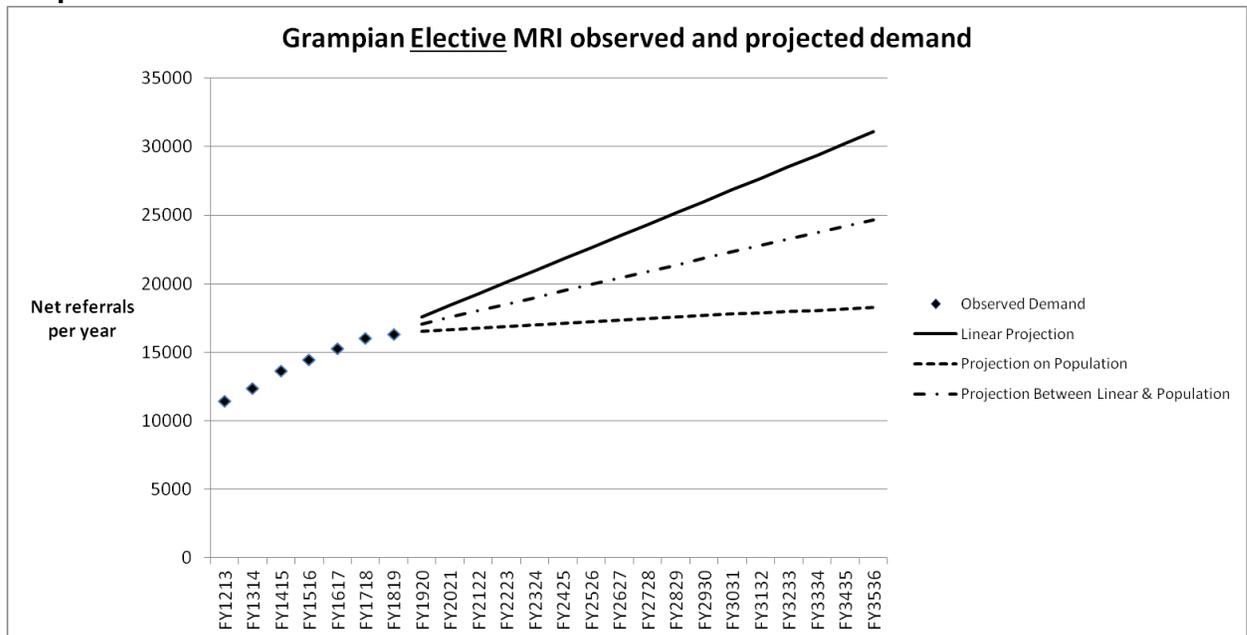
2.1 Has the strategic case for investment altered?

The Investment Objectives in the Outline Business Case (OBC) for the NHS-G National Treatment Centre around enabling additional elective capacity and thus reducing the demand and capacity gap, alongside a programme of redesign aimed at driving efficiency and optimising service delivery has been revisited and remains the same. The investment in a MRI facility and associated workforce at Dr Gray's Hospital is anticipated to positively impact on treatment times and outcomes, as well as future-proofing service delivery, removing in due course, the requirement for 3rd party imaging providers.

2.2 Confirming the proposed activity

Clinical Radiology across Grampian provides both a diagnostic and therapeutic service to patients within NHS Grampian as well as patients from Orkney and Shetland. There has been a steady increase in MRI referrals since 2012 (Graph 2.2.1) as a consequence of widespread clinical advantages of this modality, advances in technology, changes in clinical practice, guidelines leading to increased imaging requirements and developments around Artificial Intelligence. Demand has been accelerating more rapidly than would be indicated by population increase alone. Early detection of cancer is necessitating more monitoring and increased demand for follow-up tests. SIGN or NICE guidance regularly leads to greater demand for scans, and the emergency of non-malignant MDTs continues to drive up workload. It must also be acknowledged that MRI diagnostics are no longer to simply detect an abnormality, but rather to play a pivotal role in diagnosis, treatment selection, treatment planning, and follow-up of a wide variety of conditions.

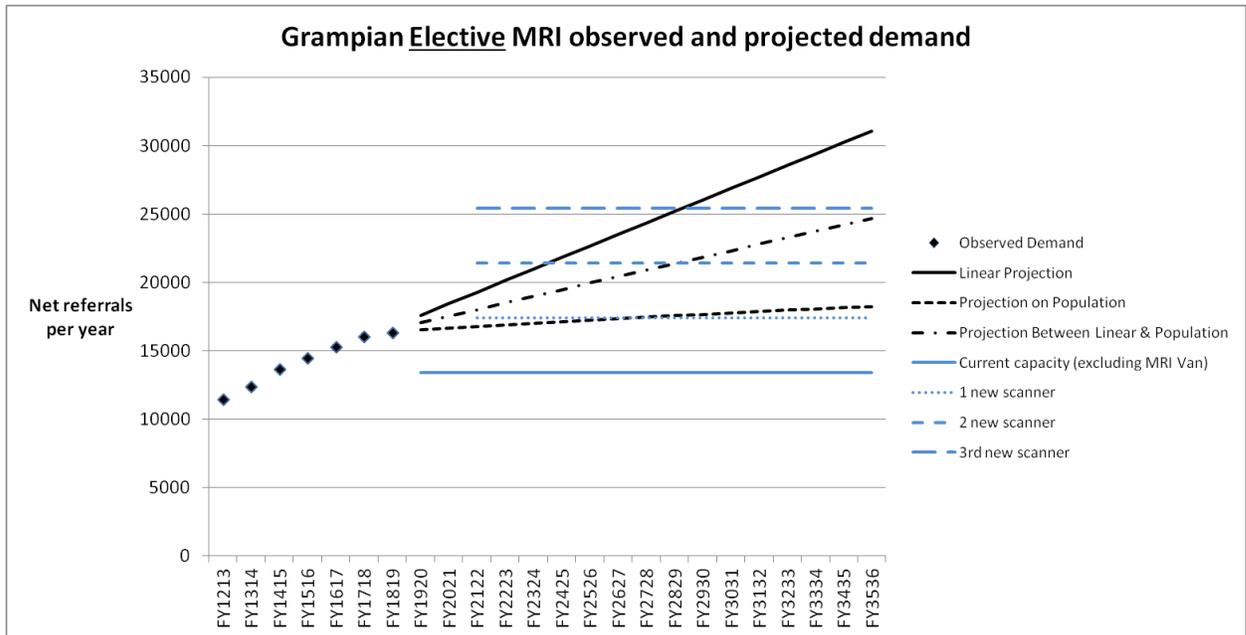
Graph 2.2.1



At the time of writing this business case, there are significant waiting time pressures for access to MRI services. Since developing the OBC, the Cabinet Secretary for Health and Social Care has written to all NHS Board Chief Executives to confirm National Treatment Centres should be planned and approved on the basis that they deliver new capacity for the increasing additional demand. The demand on MRI services has seen the number of referrals on the MRI waiting list at month end grow from 1000 in January 2015, to 1506 in January 2018, to 3255 at end of 2021. Activity and projected activity modelling work carried out as part of the broad process of engagement involving 22 clinical services over the period 2016 - 2019 remains valid (Graph 2.2.2). The rising demand which manifests as increases in waiting lists, will continue to rise until either demand is modified or capacity is increased.

Investment in a MRI Facility and associated workforce at Dr Gray’s Hospital, and as part of a wider NTC project which will also include a further additional MRI facility in Aberdeen City, will be a key enabler in the delivery of NHS Grampian to meet the additional capacity required to meet current and future elective care MRI diagnostic demand.

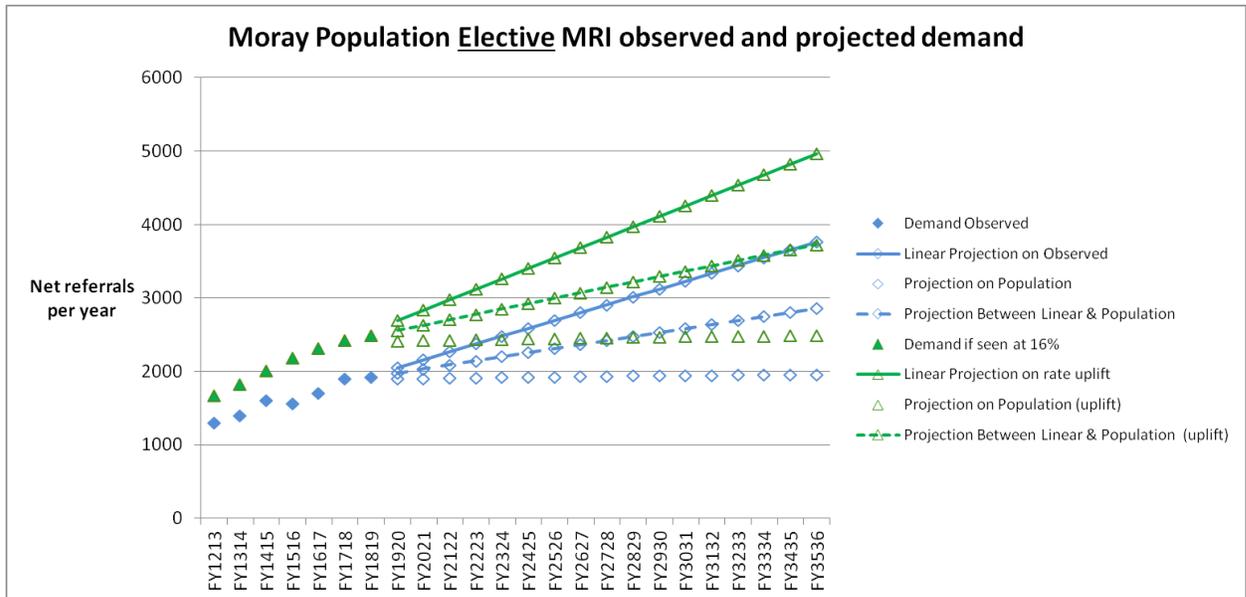
Graph 2.2.2



2.3 The Proposal

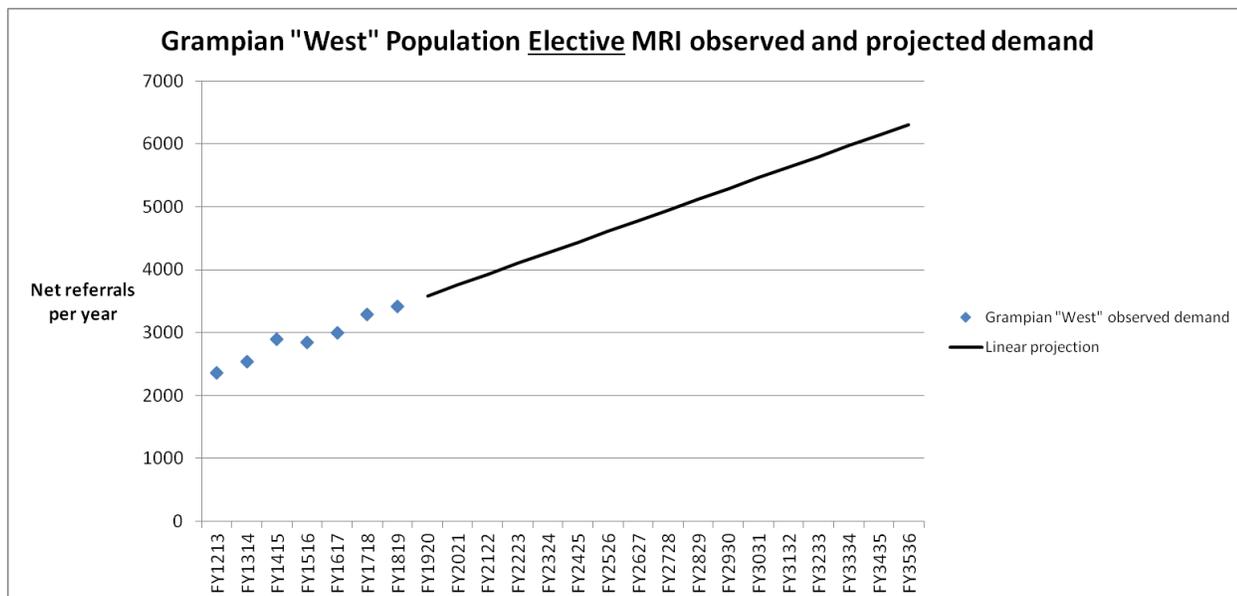
A key aim of the National Treatment Centre investment is the creation of additional scanning capacity to meet future elective care diagnostic demand. There is significant importance in achieving a balance between local and accessible services across the health care community. The National Treatment Centre MRI at Dr Gray’s Hospital, Elgin, represents the importance of additionality of MRI resource, and of matching the requirement to have Radiology resources located strategically whilst supporting key adjacencies and patient access. The facility at Dr Gray’s Hospital, Elgin represents longevity of approach in terms of providing new MRI facilities within Moray and marks a significant enhancement in availability and range of local healthcare services. Planning work reviewing the growth in MRI demand has assessed both the changes and increase in clinical usage of MRI, and also the ambition to deliver locally accessible services. The graphs (2.3.1 & 2.3.2) demonstrate that the population of Moray and West Grampian generate referrals for MRI to keep a unit in Elgin fully occupied. This also provides the potential for some resilience from a regional perspective to patients on the east of Highland as part of future North of Scotland discussions with NHS Highland. Patients from Moray and West Grampian travel a long distance for MRI (up to 150mile round trip). Expanding the Radiology capacity at Dr Gray’s Hospital, Elgin, would deliver care closer to home, reduce travel time and cost for this patient group, and contribute to an improved carbon footprint as a result of avoided travel miles. The National Treatment Centre MRI at Dr Gray’s Hospital, Elgin is supportive of a key NHSG strategic commitment as described under Places within “Plan for the Future” through alignment with Anchor Institution.

Graph 2.3.1*



*"Uplift" values calculated so that 16% of Grampian referrals would be from Moray. They have been at approximately 12.7% of Grampian referrals in the past 7 years (FY12/13- FY 19/20), but their population has been at least 16% of the Grampian total for the past 10 years

Graph 2.3.2



2.4 Why is the proposal a good thing to do?

Planning has been undertaken to an advanced level for elective work in terms of the proposed service model for the new additional MRI facility at Dr Gray's Hospital, Elgin. Detailed clinical discussions have been undertaken around types of scanning which could be undertaken at Dr Gray's Hospital, Elgin, taking into consideration both patient condition, type of scan required and workforce both in the proposed new MRI facility and across the wider Dr Gray's Hospital. The type of MRI scanning workload will encompass the following;

- Standard cancer work, including prostate cancer, gynaecological and rectal cancer (the biggest groups which get staged by MR) - should be within the remit of any standard scanner.
- Neurology and neurosurgical referrals for diagnosis and follow-up of diseases such as brain tumours, MS, spine or cord compression due to disc disease etc.
- Stroke referrals - minor strokes and TIAs
- Endocrine referrals for pituitary imaging
- Orthopaedic referrals for spinal problems such as sciatic, neck pain with arm pain, some spinal pain. A wide variety of joint imaging e.g., meniscus or ligamentous knee problems.
- ENT referrals for evaluating neck lumps, some of which will be cancer, some benign, investigating deafness.
- Whole body imaging, especially for the high-risk genetic patients and myeloma would also be suitable.
- Temporomandibular joints
- Livers and small bowel studies
- MRCP (biliary tract imaging) for jaundice or prior to cholecystectomy.
- Perianal scans for anal fistula
- Benign gynaecological disease.

It is anticipated that there will be a further level of synergy resultant from the combined effect of adding the additional modality of MRI to the Radiology department which currently provides Plain Film, CT, and Ultrasound for the local population. The availability of a MRI facility at Dr Gray's Hospital may offer potential around further scanning and treatment options for patients. The establishment of the MRI Facility at Dr Gray's Hospital, Elgin will provide enhancement in training opportunities for existing staff, recruitment opportunities for new staff cohorts, and development of employment opportunities.

2.4.1 What opportunities for improvement are there

NHS Grampian's approach to service delivery is to enable the highest standards of care to be delivered at all stages of referral, assessment, diagnosis, treatment and recovery. Care should be safe, efficient, compassionate and person centred.

The new MRI service at Dr Gray's Hospital will offer improved access to diagnostic tests in appropriate and safe clinical accommodation. There is an increasing reliance on MRI as a key part of clinical care pathways, supporting the optimal treatment and management of patients. Demand has been accelerating more rapidly than would be indicated by population increase alone, new diagnostic applications and increased therapeutic use has seen a significant increase in requirement for MRI. The investment in this service, and the growth in capacity it represents, will enhance the service available to patients and it will positively impact on treatment waiting times and outcomes. It will reduce the need for patients to travel to Aberdeen or Inverness for some MRI scans, delivering on the care closer to home strategic objective.

The new MRI facility will be built adjacent to and will connect with the existing Radiology department at Dr Gray's Hospital. It represents a planned increase in MRI facilities and services across NHSG and will provide further resilience in the MRI service offered across NHS Grampian. The new facility brings a range of benefits to the Hospital and for the Moray and West Grampian population. The expansion of the workforce trained in MRI will have positive impacts on the Dr Gray's Hospital site beyond Radiology itself, and the new MRI service will be seen as enhancing the wider Dr Gray's Hospital site.

2.4.2 What other drivers for change are there

The delivery of additional MRI capacity will support an increasing need and demand for planned treatment to ensure patients are seen in a timely fashion. Increasing patient expectations where the patient is straight to best test at right time for best result is a key objective for NHSG. Early detection of cancer, National Screening Programmes, Increased day case demand are all factors which have exerted a pressure on delivery of MRI additionality.

The recruitment and training of the additional MRI workforce provides the opportunity for increasing the MRI department profile, as the department grows in size, there will be more scope for better use of staff, enhancing workforce sustainability and continuing professional development with opportunities around enhanced training and development as the modality reaches a critical mass. As the MRI department grows in size, opportunities can also evolve around cross-site and agile working.

The use of more patient focused booking, using technology to support both administrative processes around patient flow and also multidisciplinary team communications has been identified as a key enabler in driving forward and delivering efficiencies and modernised processes.

2.4.3 Summarising the need for change

The outlined need for additional elective care MRI provision in Grampian as detailed in both the Initial Agreement (September 2018) and Outline Business Case (July 2019) remains the case. Additional MRI provision is required to cope with an increase in demand for MRI provision over the period up to 2035. The pivotal role MRI plays in diagnosis, treatment selection and follow-up has been described. The opportunity to establish a new additional MRI service at Dr Gray's Hospital Elgin is beneficial not just in terms of additionality, but also acknowledges the dispersed geography of NHS Grampian and the objective of delivering optimal clinical pathways of care closer to home. The opportunity to deliver high-quality care and treatment as efficiently, as close to home as possible to meet current and future need is a central vision underpinning the National Treatment Centre Grampian (NTC-G) Dr Gray's Hospital MRI, and is in support of the NHS Grampian "Plan for the Future".

2.4.4. What is the organisation seeking to achieve

In response to the key question around what the organisation is seeking to achieve, we must look to the aspirations and planning around the future state of Radiology and specifically the MRI modality. The importance of Radiology Services is recognised by NHS Grampian. There is no substantive change to the strategic case which would alter the preferred strategic solution articulated in the IA and OBC. A thorough and clear understanding of the current position of the clinical service, the priorities and risks it faces, are a key factor in the inclusion of Radiology services within the National Treatment Centre planning and future provision. The extensive and comprehensive engagement with Radiology, (alongside 21 other clinical services), as part of the initial brief in 2016/2017 which enabled understanding, conclusions and planning for those services which would benefit most from transformational clinical redesign and change, has resulted in delivery of additionality in MRI services, the first of which will be at Dr Gray's Hospital.

2.5 Investment Objectives

The investment objectives remain the same as identified in the OBC, and for the Dr Gray's Hospital NTC MRI are as follows:

- Improved future service capacity by improving supporting asset base (additional new MRI service on Dr Gray's Hospital site)
- Improve service performance and efficiency by optimising service redesign. The multi-disciplinary clinical team in Radiology have identified the patient cohort who will be scanned on the new NTC Dr Gray's Hospital MRI. The Radiology clinical team have also been substantially involved in the design of the new facility, and care in the planning has been taken to develop the design to enable patient flow, optimise the patient and staff environment, and deliver on building functionality in terms of its use, access and space.
- Service redesign is enabled by use of, and access to technology; - the accelerated implementation of technology in response to the COVID pandemic has remained embedded in clinical and

organisational behaviours, allowing for space to be “freed-up” for the most appropriate direct clinical contact.

- Meet user requirements for service by being more person-centred; the design statement for the new MRI facility is in support of building on the best of what has gone before. Working alongside a wide group of stakeholders, it will deliver excellence in design to optimise the patient experience.
- Improved services and sustainable workforce and equity of local access to treatment as far as possible and regionally where required, with harmonised access agreements across NoS Boards. A workforce plan has been developed specifically related to the NTC MRI facility at Dr Gray’s Hospital, which details the future workforce which is needed to provide a safe and effective service.
- Improved facilities in place to support modern outpatient care. All planning related to the NTC MRI facility at Dr Gray’s Hospital is based around a vision of a world class, person-centred sustainable radiology service that continually improves the health and wellbeing of the people of Scotland.

2.6 Benefits

A workshop was convened on 09 September 2021 to review and confirm the project benefits and to rank and weigh them in advance of scoring.

10 stakeholders were involved in workshop discussions in addition to the NTC clinical leads and Project Team non-scoring representatives. At the workshop, the benefits were reviewed, ranked and weighted. A summary of the outputs is identified in the following table: (Table 2.6.1).

Table 2.6.1

BENEFIT CRITERIA	SCORING CONSIDERATIONS	WEIGHTING
Promotes service redesign/flexibility and optimises planning (including improved use of technology). Creates a supportive patient environment	How an option impacts on the potential for redesign and new ways of working; public perception about different options	5
Enhanced and efficient patient flows	Potential to optimise the patient journey and wayfinding; efficiency of intra (within) and inter (between) - departmental adjacencies;	9
Improved access to diagnostics and treatment; supports the implementation of realistic medicine	Potential to: incorporate service developments faster; improve high volume/low risk workload and create capacity for complex, low volume activity elsewhere in the system	9
Delivery timescale	Speed of delivery of the option	2
Promotes service and workforce sustainability	Ability to: facilitate training and capacity to improve training opportunities generally; accommodate trainees; to promote staff well being; enable new and flexible workforce roles and working practices; improve recruitment & retention	18
Ease of access to the facility in general and egress in emergency situations	Access to car parking, impact on green agenda (e.g. car charging points), access to the MRI suite, egress in an emergency (car park or hospital)	17
Improved performance against agreed TOM metrics (e.g. LOS, throughput)	Ability to undertake complex cases and impact on inpatient LoS, optimises throughput per session	11
Enables flexibility and future proofing	Building specific benefits; compliance with Scottish Healthcare Planning Note (SHPN) space standards; facilitate equipment upgrades and replacement of the magnet	13
Ability to meet MRI technical and safety considerations	Proximity of road to MRI scanner, gauss lines - consequences of fringe field spilling into adjacent rooms. Ability to create high quality images. Safety considerations e.g. MHRA	18

3.0 The Economic Case

3.1 Introduction

The purpose of the Economic Case is to undertake a detailed analysis of the costs, benefits and risks of a short-list of implementation options illustrating how NHS Grampian (NHSG) has selected the solution to be taken forward to construction. It demonstrates the relative value for money of the chosen option in delivering the required outcomes and services.

The appraisal of the costs, risks and benefits associated with the site options identified has been revisited since the OBC and is examined below.

3.2 Approach to Economic Case

Investment in a National Treatment Centre MRI facility at Dr Gray's Hospital was identified as a key component of the preferred way forward in the OBC for the NTC Grampian. A short list of physical solutions has subsequently been appraised to support a stand-alone Standard Business Case (SBC);

- Option A – (Reference design) New build adjacent and connecting to existing DGH Radiology department
- Option B – Amended Floorplan (reduction in SOA, M&E value engineered changes, changes to build materials)
- Option C – Modular Solution
- Option D – Mobile Solution

In preparation for the scoring of the new short-list of options, a workshop was convened on the 9th of September 2021 to review and confirm the project benefits and to rank and weight them in advance of scoring.

10 stakeholders were involved in workshop discussions in addition to the NTC clinical leads and Project Team non-scoring representatives.

At the workshop, the benefits were reviewed, ranked and weighted.

A second workshop was then convened on 21st September to score the short-list of the location/ delivery options, the outputs of which are identified below, and full report is available as Appendix 3.2.

3.3 Outcome of the Option Appraisal

Table E1 below provides the ranked and weighted project benefits, as agreed at the workshop on the 9th of September 2021.

Table E1: Ranked and weighted project benefits

BENEFIT CRITERIA	SCORING CONSIDERATIONS	WEIGHTING
Promotes service redesign/flexibility and optimises planning (including improved use of technology). Creates a supportive patient environment	How an option impacts on the potential for redesign and new ways of working; public perception about different options	5
Enhanced and efficient patient flows	Potential to optimise the patient journey and wayfinding; efficiency of intra (within) and inter (between) - departmental adjacencies;	9
Improved access to diagnostics and treatment; supports the implementation of realistic medicine	Potential to: incorporate service developments faster; improve high volume/low risk workload and create capacity for complex, low volume activity elsewhere in the system	9
Delivery timescale	Speed of delivery of the option	2
Promotes service and workforce sustainability	Ability to: facilitate training and capacity to improve training opportunities generally; accommodate trainees; to promote staff well being; enable new and flexible workforce roles and working practices; improve recruitment & retention	18
Ease of access to the facility in general and egress in emergency situations	Access to car parking, impact on green agenda (e.g. car charging points), access to the MRI suite, egress in an emergency (car park or hospital)	17
Improved performance against agreed TOM metrics (e.g. LOS, throughput)	Ability to undertake complex cases and impact on inpatient LoS. optimises throughput per session	11
Enables flexibility and future proofing	Building specific benefits; compliance with Scottish Healthcare Planning Note (SHPN) space standards; facilitate equipment upgrades and replacement of the magnet	13
Ability to meet MRI technical and safety considerations	Proximity of road to MRI scanner, gauss lines - consequences of fringe field spilling into adjacent rooms. Ability to create high quality images. Safety considerations e.g. MHRA	16

Table E2 provides the outcome of the scoring workshop on 21st September:

Table E2: Options Benefit Scoring

DESIGNATION		TOTAL SCORE	RANK
Scope A	New build adjacent and connecting to existing DGH Radiology Dept.	795.2	1
Scope B	Amended Floorplan (reduction in SOA), M&E value engineered changes, changes to build fabric	704.9	2
Scope C	Modular Solution	623.7	3
Scope D	Mobile Solution	360.7	4

The clinically lead review, which had very good involvement with clinicians, has confirmed from a qualitative perspective that Option A is the preferred way forward for the Dr Gray's Facility as determined by the stakeholder scoring group.

However we require to take forward the scoring from the qualitative process into an Economic Appraisal to in order to establish the best option from a value for money perspective.

Options C and D, which represent facilities of a more temporary nature, are ranked significantly below Options A and B in terms of the qualitative scoring. Inherent in the low scoring are the significantly lower overall benefits provided over the life of the facilities and the lower patient and staff experience.

As a result, Options C and D are ruled out completely at this point and only Options A and B have been taken forward into the Economic Appraisal.

3.4 Economic Appraisal

A detailed analysis of the costs, benefits and risks of a short-list of options has been undertaken illustrating how NHS Grampian has selected the preferred option to be taken forward. It demonstrates the relative value for money of the chosen options in delivering the required outcomes and services.

The Strategic Case in this paper confirms that since the programme OBC there are no changes to the Investment Objectives nor material changes to the demand and capacity for the clinical services that form part of this solution.

3.4.1 Identification and Quantification of Monetary Costs and Benefits of Options

The construction costs for Options A and B were calculated between December 2020 and April 2021, during the period leading up to the workshops for the Option Appraisal. They were based on the draft elemental cost plan prepared by our Cost Advisors (AECOM). For the purposes of the Economic Appraisal in this Business Case, it is not necessary to undertake a costly exercise to bring these costs up to current levels. It is recognised that there has been significant construction inflation since that time, however the cost of the options would inflate at the same proportionate rate. Equipment cost estimates are however based on the most up to date equipment schedule. Table E3 below provides the costs, which exclude VAT as per the SCIM guidance for Economic Appraisal:

Table E3: Capital Cost Implication Summary – Short-Listed Options

	Option A	Option B
	£000's	£000's
Capital Costs		
Construction Cost	2,665	1,686
Prelims, Fees, On-Costs	444	281
Risk	93	59
Equipment	1,500	1,500
Client Costs	70	70
Commissioning Costs	9	9
Total Capital Costs	4,781	3,605

No specific and material monetary benefit associated with the development of this facility has been identified for inclusion within the appraisal. Minor efficiencies are expected to be realised and used to offset recurring revenue costs arising from the delivery of the preferred service option.

The recurring revenue costs for the two Options are listed in table E4 below:

Table E4: Recurring Revenue Cost Implication Summary – Short-Listed Options

	Option A	Option B
	£000's	£000's
Recurring Revenue Costs		
Clinical Service Costs	692	692
Building Running Costs	69	58
Equipment Service Costs	90	90
Total Recurring Revenue Costs	851	840

3.4.2 Net Present Cost of Options

The financial evaluation, calculating net present cost of each option, is set in the context of the guidance provided in the Scottish Capital Investment Manual (SCIM). It incorporates a full analysis of the revenue and capital costs for each option, as identified in the above tables.

A Generic Economic Model (GEM) was applied to the monetary costs and benefits of the options to derive the comparative cost implications of each of the options in the form of Equivalent Annual Costs (EAC) and NPC.

The appraisal process identifies the relevant costs and financial risks and benefits over the Project development and expected asset life associated with each of the short-listed options.

Phasing of construction cash flows is consistent with the current Project programme.

Tables E5 provides a summary of the updated cost implications together with NPC for each of the short-listed options for both facilities.

In accordance with guidance, capital charges, inflation and VAT are excluded from the calculations. Capital and revenue costs are added together to calculate a net present cost for total expenditure.

Table E5 reflects these costs.

Table E5: Summary Cost Implications Short-List Options – SBC

	Option A	Option B
	£000's	£000's
Capital Cost Implications	4,781	3,605
Additional Recurring Revenue Implications	851	840
Net Present Cost (NPC)	23,869	22,468
Rank	2	1

Due to the higher Capital cost and subsequent higher recurring revenue costs, the preferred Option from the scoring workshops (Option A) is ranked below Option B in quantitative terms.

3.5 Conclusion and Confirming the Preferred Options

The Economic Case demonstrates that Option A is the preferred Option from a workshop scored qualitative perspective (Table E2), but Option B ranks higher from a quantitative/financial perspective (Table E5).

The Economic Appraisal concludes by combining qualitative and quantitative factors to produce a final Economic Case ranking for each Option. This is done by dividing the Net Present Cost generated by the GEM model by the qualitative score for each Option.

Table E6 below shows that when this is applied, Option A is ranked marginally higher at a cost of £30,000 per benefit point compared to £32,000 per benefit point for Option B. Therefore the conclusion from the Economic Case is that Option A is marginally better value for money.

Table E6: NPC per Non-Monetary Benefit Score

	Option A	Option B
Net Present Cost (NPC) (£000's)	23,869	22,468
Non-Financial Weighted Benefit Score	795.2	704.9
NPC per Weighted Benefit Score (£000's)	30	32
Rank	1	2

The conclusion from the Economic Case is now taken forward into the Financial Case to determine overall affordability.

4.0 The Commercial Case

Executive Summary

The Project is a health project with an investment cost in excess of £5 million. It forms part of a programme of National Treatment Centre developments which are planned to be funded by means of a SG capital budget allocation and procured under the NHS Scotland Frameworks Scotland 2 (FS2) arrangement. An addendum to the Standard Business Case (SBC) will be taken to a future Board meeting for final agreement on price and programme prior to proceeding to construction.

The contractual arrangements for each stage of the Project Development have used the FS2 Frameworks Agreement New Engineering Contract 3 (NEC3) Option C contract. The construction stage contract will be standalone from the delivery of other aspects of the National Treatment Centre – Grampian programme, and is being developed and modified with appropriate professional advice, to reflect the nature of project complexities and risk. Key contractual risks are being allocated to the party best able to manage it.

Following a competitive process, RMF Health were appointed as the Principal Supply Chain Partner (PSCP) in December 2019. The PSCP Target Price for construction will be submitted following completion of the tender process and cleansing and the Cost Advisor confirming it is representative of the cost of delivering the works will form part of the construction stage contract.

The MRI Scanner will be procured direct by NHS Grampian and HFS Equipping Service have been commissioned to support the specification and deployment. The procurement strategy and programme will be confirmed early in the construction stage of the project. There has been early project engagement by HFS. Discussions between multi-disciplinary clinical team and HFS recommend procurement as a call-off, of the Framework. High level timescales have been developed related to the overall procurement process. Key activities which can be completed at this stage, such as confirmation of patient clinical cohort and completion of MRI specification, in advance of NHSG Board approval have been undertaken. HFS support has been provided for focused discussions at this early stage, with suppliers and turnkey contractors.

4.1 Overview

This section outlines the commercial arrangements and implications for the Project. This is done by responding to the following points:

- the procurement strategy and appropriate procurement route for the Project
- the scope and content of the proposed commercial arrangement
- risk allocation and apportionment between public and private sector
- the payment structure and how this will be made over the lifetime of the Project
- the contractual arrangements for the Project

4.2 Procurement Strategy

4.2.1 Procurement Route

The Project is a health project with an investment cost in excess of £5 million. It forms part of a programme of National Treatment Centre developments which are planned to be funded by means of a SG capital budget allocation and procured under the NHS Scotland Frameworks Scotland 2 (FS2) arrangement. The following are the key features of this arrangement:

- The Framework Agreement is managed by Health Facilities Scotland (HFS) (a division of NHS National Services Scotland) on behalf of the Scottish Government Health Directorate (SGHSCD).
- The Framework embraces the principles of collaborative working, public and private sectors working together effectively, and it is designed to deliver on-going tangible performance improvements due to repeat work being undertaken by the supply chains.
- The form of contract is likely to be the Engineering and Construction Contract (NEC3), Option C.
- The general principle of the Framework is that risks are passed to 'the party best able to manage them', subject to value for money.

In addition, to the appointment of the PSCP, the NHS SCOTLAND (NHSS) Consultant Frameworks were also utilised for the appointment of: Construction Design Management (CDM) Advisor, Cost Advisor (CA), Project Manager and Healthcare Planner.

Consistent with other projects using this procurement route the specification, procurement and deployment of Group 2, 3 and 4 equipment including the MRI Scanner will be undertaken directly by NHS Grampian. HFS Equipping Service have been commissioned to support the specification and deployment of the MRI scanner. The procurement strategy and programme for the MRI scanner will be confirmed in the early in the construction stage of the project. There has been early project engagement by HFS. Discussions between multi-disciplinary clinical team and HFS recommend procurement as a call-off, from a relevant Framework. High level timescales have been developed related to the overall procurement process. Key activities which can be completed at this stage, such as confirmation of patient clinical cohort and completion of MRI specification, in advance of NHSG Board approval, have been undertaken. HFS support has been provided for focused discussions at this early stage, with suppliers and turnkey contractors.

This capital procurement route is consistent with the other National Treatment Centre developments currently being progressed across Scotland, and is part of the 2016 National Clinical Strategy for Scotland (the framework for the development of health services across Scotland for the next 15 years).

4.2.2 FS2 Procurement Process (Mini Competition)

Initially Graham Construction had been appointed as PSCP to support the delivery of the National Treatment Centre - Grampian Programme. Following completion of the initial design stage NHS Grampian elected to undertake a mini-competition under FS2 to confirm PSCP arrangements. On Friday 18 December 2019, NHS Grampian appointed RMF Health as PSCP to conclude the pre-construction stage.

4.2.3 Project Programme

The programme for concluding delivery of the Project is under development, pending conclusion of market testing and site access arrangements. It is anticipated that the facility will be operational in the later stages of 2023/24. A programme will be confirmed in a Standard Business Case addendum prior to finalisation of contractual arrangements for the construction stage of the project.

4.2.4 Equipment

NHSG has entered into a Service Level Agreement (SLA) with the HFS Equipping Service consistent with earlier projects to support the specification, procurement and deployment of most Group 2, 3 and 4 equipment and the specification of Group 1 medical equipment.

NHSG will procure direct of group 2, 3 & 4 equipment and will utilise existing frameworks where available. The approaches adopted will be consistent with the Board's Standing Financial Instructions.

4.2.5 Advisors

Four advisor appointments under the NHS SCOTLAND Consultants Framework have been made in relation to the National Treatment Centre – Grampian Programme. The appointments were based on responses to a HLIP and interviews were evaluated by a multi-professional panel from NHSG supported by HFS as outlined in Table C1. Final advisor arrangements for delivery of this MRI facility will be confirmed prior to commencement of the construction stage of the project.

Table C1: Appointed External Advisors

Framework	Appointment	Date
Healthcare Planner	Buchan + Associates	November 2016
Cost Advisor	AECOM	December 2018
CDM Advisor	Doig+Smith	May 2019
Project Manager	Currie & Brown	December 2018

4.3 Scope and Content of Proposed Commercial (including NDAP etc.) Arrangements

4.3.1 Arrangements

The purpose of this section is to specify the scope and content of the proposed works/services included within the proposed commercial arrangements.

4.3.2 Scope of Works/Services

The PSCP Scope of Services are as defined in the standard FS2 Framework Agreement, and in, summary relates to providing all aspects of the design and construction of the facilities as set out in the Background and Scope Documentation (Appendix 4.3.2), which sits alongside planning underway for the whole of the Dr Gray's Hospital site (Appendix 4.3.2 to be provided as part of addendum submission).

All Facilities Management (FM) services, maintenance and lifecycle (including soft FM such as domestic, catering, portering and external grounds maintenance) will be provided by the Board and the Finance case includes provision required for the additional staffing which will be attracted as part of this investment.

Responsibility for procurement of equipment is as follows:

- Group 1 items of equipment, which are generally large items of permanently installed plant or equipment, will be supplied and installed by the PSCP and maintained and replaced by the Board
- Group 2 items of equipment, which require to be fixed to the building structure, including the MRI scanner, will be supplied by the Board, installed by the PSCP/turnkey contractor and maintained by the Board
- Group 3 - 4 items of equipment are supplied, installed, maintained and replaced by the Board.

The new MRI facility at Dr Gray's Hospital comprises of 12 clinically focused rooms, with a Gross Internal Floor Areas of 273.75 sq. m which has been designed around the patient journey. The new build will physically connect to the existing Radiology department and will benefit from sharing support services and infrastructure (Reception, Patient main waiting area, toilets and access to main hospital food and beverage facilities) which are currently in place. The MRI at Dr Gray's Hospital, Elgin, will operate as a dedicated elective care unit for Moray and West of Grampian.

4.3.3 NHS Scotland Design Assessment Process (NDAP)

The purpose of the NHS Scotland Design Assessment Process (NDAP) is to promote design quality and service. It does this by mapping design standards to the key investment deliverables, including Scottish Government objectives and expectations for public investment, then demonstrating their delivery via self and independent assessments.

The Project Team and wider clinical service at Dr Gray's Hospital, Elgin, have had regular dialogue with Architecture Design Scotland (A+DS) and Health Facilities Scotland (HFS). Discussions around key design principles have been fully engaged with, seeking to avoid the need for redesign later in the process.

4.4 Risk Allocation

4.4.1 Key Principles

The key principle is that risk has been allocated to the party best able to manage it, with the objective to optimally allocate risk.

This will be achieved commercially during the construction stage by the identification of employer risks in the PSCP contract and by the allocation of the costed risks between the employer and the contractor.

A Risk Register, has been prepared and is maintained collaboratively with RMF and appointed consultants associated with this Project. This sets out the owner and manager for each risk.

The risk allocation shown in Table C2 shows the high level allocation of commercial risk between the parties. This is shown as percentage allocation.

4.4.2 Risk Allocation Table

Table C2: Risk Allocation

Risk Category	Potential allocation of risk		
	Public	Private	Shared
Client/business risks (title, ground conditions, where not disclosed)	100%	0%	
Design	30%	70%	Y
Development and construction (note dark ground, contamination remain with public)	50%	50%	Y
Transition and implementation (commissioning, migration Board responsibility)	100%	0%	
Availability and performance During Operation	100%	0%	
Operating	100%	0%	
Revenue	100%	0%	
Termination	50%	50%	Y
Technology and obsolescence	80%	20%	Y
Control	100%	0%	
Financing	95%	5%	Y
Change in law	100%	0%	
Other Project risks	75%	25%	Y

Note that while financing risk is with the public sector, there is a pain share/gain share mechanism which is an integral part of FS2 to incentivise the PSCP to keep the target price within agreed limits.

4.5 Payment Structure

Under FS2, PSCs and PSCPs are appointed under an NEC3 Option C Target Price contract which has been specifically structured to provide a more predictable cash flow for the NHS client. The Target Price is based on a submitted Activity Schedule. The Client pays actual cost only up to the Target Price ceiling. Any cost beyond this is borne by the PSC or PSCP.

The PSCP Target Price for construction is jointly developed on an 'Open Book' basis. The PSCP is paid Defined Cost plus Fee Percentage (i.e. actual cost of labour, plant, materials and sub-contract work plus a fixed percentage for overhead and profit) but only up to the ceiling price of the Target Price. If savings are generated against Target Price then these are shared on a 50/50 basis up to 5% below the Target Price (PSCP contract only).

The Board will pay for the construction of the facilities by way of regular payments as the construction work proceeds.

4.5.1 Risk Contingency Management

The general risk management process and high level allocation is noted in Table C2. A full Project Risk Register has been developed and the risk contingency will be managed under the Compensation Event (CE) process noted below. This involves the Project Manager or Contractor raising early warnings of potential risks then addressed at the risk reduction meetings.

4.5.2 Contract Variations

As noted, the Project is procured under the FS2 NEC3 form of contract which manages contract variations by means of compensation events. The major benefit of this process is that variations are dealt with as soon as they become apparent and are costed and agreed as they arise.

The compensation event process enables any variations or employer's risk items which transpire to be reflected in an adjustment to the Target Price and/or an adjustment to the programme reflecting the impact of the variation.

4.5.3 Disputed Payments

The FS2 NEC3 form of contract has processes to manage disputed payments and PSCP applications for payment may have disallowed costs which are monitored by the CA at each monthly assessment to ensure that only payments due and fully accounted for are passed.

4.5.4 Payment Indexation

Payment indexation is managed centrally on FS2 and hourly staff rates for both PSCs and PSCPs are adjusted and notified annually across the Frameworks by HFS. Construction inflation is managed by reference to Building Cost Information Services (BCIS) published cost indices. The construction inflation risk is held by the PSCP for the first two years of the programme. The risk is then passed to the NHS Client for the balance of the programme beyond two years.

4.5.5 Utilities and Service Connection Charges

As the Project is publically funded, utilities and service connection charges are paid by NHSG as part of the contract.

4.5.6 Performance Incentives

FS2 has a pain/gain incentivisation model as detailed earlier in section 4.5, Payment Structure.

4.6 Contractual Arrangements

This section outlines the contractual arrangements for the procurement, including the use of a particular contract, the key contractual issues for the commercial deal and any personnel implications.

4.6.1 Type of Contract

The Contract is the FS2 NEC3 Contract, Option C, and Target Price with Activity Schedule. The PSCP, CDM Advisor and Health Care Planners have all been appointed to the Project on a NEC3 Contract Option C Target Price. The Cost Advisor and Project Manager have all been appointed to the Project on a NEC4 Contract Option C Target Price.

The PSCP construction stage contract for the development of this MRI facility will stand separately from that which will deliver the remainder of the National Treatment Centre - Grampian programme.

4.6.2 Key Contractual Issues

A number of Project specific Z clauses have been developed in dialogue with HFS and RMF Health for the Project, these have been adopted for this contract at this stage. The Project specific clauses relate to:

- defects liability
- retention
- limitation of liability
- insurance

4.6.3 Personnel Implications

There are no employees who are wholly or substantially employed on services that will be transferred to the private sector under the proposals for this Project, and therefore the Transfer of Undertakings (Protection of Employment) Regulations 1981 (TUPE) will not apply.

4.6.4 Key Commercial Risks

The Risk Register outlines the current risks being managed by the Project Team. The Register is dynamic and is updated regularly by the joint Project Team. Market conditions and the submission of an affordable target price are a key feature of this register.

5.0 The Financial Case

5.1 Introduction

The Financial Case considers the overall affordability of the preferred option both in the context of the Board's financial plans, Scottish Government (SG) additional funding and in comparison to the short-listed options. An addendum to the Standard Business Case (SBC) will be taken to a future Board meeting for final agreement on price and programme prior to proceeding to construction

The preferred option from the Economic Case is marginally Option A (New build MRI Facility, adjacent and connected to Radiology Department – Full Scope).

However the Financial Case must consider the resources available to deliver the preferred Option and reflect on the fact that Option A is more costly and delivers only slightly greater value for money (due to a higher qualitative benefits score) compared to Option B.

The Project Team and Stakeholders recognise that Capital Funding for the National Treatment Centre Program, of which the Dr Gray's MRI Facility is part of, is limited. Objectively, Option B delivers all of the important benefits at a lower cost than the slightly larger Facility of Option A.

As a result of this, further development of Options A/B has been undertaken since the Option scoring exercise in 2021, including a Value Engineering review. A hybrid Option has emerged, incorporating elements of both Option A and B (at a lower cost to Option A, taking recent construction inflation into account) and this development has been designated 'Option E'. It is this Option which is considered below.

NHS Grampian is committed to the Project. As the Project forms part of the Board's National Treatment Centre program, all of the Capital funding will be requested from SG. The funding for the revenue consequences has been incorporated in the Board's financial plans for the coming years.

Further details of the capital and revenue elements of the Project and sources of funding are provided in the following sections.

The capital investment required to deliver the Project is under review as the design for the facility develops. The current estimate is £5.5 million inclusive of VAT, as set out in Table F1 below. This total also includes all of the new equipment required to deliver the service.

Table F1: Summary of Initial Capital Investment

	Total SBC
	£000's
Capital Costs	
Construction Related Costs	3,382
Client Costs (Professional Fees)	70
Client Contingency/Risk	239
Equipment, Inc. MRI Turnkey	1,800
Commissioning Costs	9
Total Capital Investment	5,500
Sources of Funding	
SG Capital Funding	5,500
Total Sources of Funding	5,500

The revenue implications in the first full year of operation are set out in Table F2.

Table F2: Summary of Revenue Implications - First Full Year of Operation (2024/25)

	Total SBC
	£000's
Revenue Costs	
Additional Depreciation	254
Additional Clinical Service Costs	782
Building Related Running Costs	58
Total Costs	1,094
Sources of Funding	
SG (Waiting Time Improvement Plan/Access Funding)	840
SG (Depreciation Funding)	254
Total Sources of Funding	1,094

Further details of the capital and revenue elements of the Project and sources of funding are provided in the following sections.

5.2 Financial Model: Costs and Associated Funding for the Project

The following sections set out how the key financial implications of the Project have been identified and the assumptions influencing them.

5.2.1 Capital Investment

5.2.2 Construction Costs

The estimated build costs have been produced by the Principal Supply Chain Partner (PSCP) for the Project based on the developing design.

Table F3 sets out the anticipated construction costs for the new facilities.

The assumptions in preparing these costs are as follows:

- Construction start date: Q3 2022;
- Construction program: 38 Weeks
- Construction inflation for the project has been included by the PSCP and scrutinised by Cost Consultants AECOM
- Construction risk is based 3% of Construction cost for the PSCP
- The Dr Gray's MRI facility will be built on land already owned by NHSG, on behalf of the Scottish Ministers.

Table F3: Construction Costs

	Total SBC
	£000's
Construction Related Costs	
Building Costs	2,065
Prelims, Fees, On-Costs	737
PSCP Risk	93
VAT	487
Professional Fees (CA, CDM, PM)	70
Client Risk	239
Total Construction Costs	3,691
Sources of Funding	
SG Capital Funding	3,691
Total Sources of Funding	3,691

5.2.3 New Equipment

As the service is entirely new, there is a requirement for investment in new equipment. This has been estimated at £1.8 million (inclusive of VAT).

This level of investment is not affordable within the Board's annual formula capital funding allocation, which is fully committed to other essential equipment replacement and backlog maintenance priorities as part of the Board's agreed five year infrastructure investment plan and will require to be funded in full as part of the National Treatment Centre program from the Scottish Government.

Equipment allowances have been developed based on the Schedule of Accommodation (SOA) for the Project and will continue to be refined over the course of the Project.

Table F4 sets out the requirements in relation to equipment.

The Board will continue to refine this cost estimate as the design progresses to finalised Room Data Sheets (RDS)

Table F4: Summary Equipment Cost Implications

	Total SBC
	£000's
Equipment Costs	
MRI Scanner & Turnkey	1,400
Other Equipment	400
Total	1,800
Sources of Funding	
SG Capital Funding	1,800
Total Sources of Funding	1,800

5.2.4 Commissioning Costs

Additional non-recurring costs are anticipated in 2023/24 in respect of commissioning of the building. An estimated £9,000 will be required to meet the cost of pre-cleaning, deployment of equipment (including IT), as set out in Table F5.

Table F5: Project Commissioning Costs

	Total SBC
	£000's
Commissioning Costs	
Removal (Inc. Flooring Protection)	5
Domestic	3
IT Support	1
Total Commissioning Costs	9
Sources of Funding	
SG Capital Funding	9
Total Sources of Funding	9

5.2.5 Recurring Revenue Costs

The Project will deliver a new Building which will attract additional running costs and a new Clinical Service which will attract additional Staffing and non- pay costs. The Board is planning for and managing these. External review of workforce planning numbers is under continuing close scrutiny, drawing on expertise from other National Treatment Centres across Scotland.

Table F6 sets out the revenue cost estimates and assumes that staff are recruited in early 2023 for training purposes and that the service is fully operational later that year.

Table F6: Summary of Recurring Revenue Implications - First Full Year of Operation (2024/25)

	Total SBC
	£000's
Revenue Costs	
Additional Depreciation	254
Additional Clinical Service Costs	782
Building Related Running Costs	58
Total Costs	1,094
Sources of Funding	
SG (Waiting Time Improvement Plan/Access Funding)	840
SG Depreciation Funding	254
Total Sources of Funding	1,094

The recurring funding for the business case will form part of the Board's Waiting Times Plan, which will incorporate the above requirement to fund the £0.84 million revenue consequence of the new service.

5.2.6 Depreciation

The current hospital premises, the land on which it sits and the adjacent land on which the new build element of the facility will sit, are owned by NHSG on behalf of the Scottish Ministers. The NHS Scotland Capital Accounting Manual has been followed throughout in creating these calculations. The computations for assets are based on the following lives:

- new build – 45 years
- equipment – 10 years

The new build elements are assumed to be depreciated over an average expected life of 45 years and equipment over an expected life of 10 years. Annual depreciation is set out in Table F7 below, and sets out a net additional depreciation of £0.254 million.

Table F7: Total Depreciation - First Full Year of Operation (2024/25)

	Total SBC
	£000's
Depreciation	
Equipment	180
Building	74
Total Depreciation	254
Sources of Funding	
SG Depreciation	254
Total Sources of Funding	254

5.2.7 Building Related Running Costs

As the preferred option is a New Build Facility, there will be an increase in property related running costs for the Board.

Detailed costing of building running costs based on the emerging design has been undertaken and the costs are summarised below in Table F8.

Table F8: Additional Building Related Running Cost - First Full Year of Operation (2024/25)

	Total SBC
	£000's
Building Related Running Costs	
Rates	6
Water Rates	1
Electricity	18
Heating	7
Domestics	16
Property Maintenance	10
Total Annual Costs	58
Sources of Funding	
SG (Waiting Time Improvement Plan/Access Funding)	58
Total Sources of Funding	58

5.2.8 Clinical Service Costs

The Project will provide a new service and will result in additional staffing costs, medical supplies and equipment maintenance. These are detailed in Table F9. An additional scrutiny process around additional workforce requirements is underway, utilising learning from other NHS Scotland National Treatment Centres. This will be finalised and provided in the SBC addendum.

Table F9: Additional Clinical Service Costs - First Full Year of Operation (2024/25)

	Additional Annual Staff Cost	Other Costs	Additional Staff	SBC
	£000's	£000's	WTE	£000's
Staffing	657		8.80	657
Medical Supplies & Other		35		35
Equipment Maintenance		90		90
Total	657	125	8.80	782

5.2.9 VAT

Anticipated VAT has been included within the costs presented. The following are the key assumptions:

- Construction Costs: a rate of 16.84% has been applied. This is net of the recoverable sums (15.8%) for this scheme being agreed with HMRC
- Equipment Costs: a rate of 20% has been applied
- Recurring Revenue Costs: where applicable, VAT is assumed non recoverable

5.2.10 Financial Risk and Dependencies

All of the risks are identified within the Project Risk Register and are currently open. It is anticipated that the majority of risks will be closed or mitigated to reduced levels in the period leading up to signing of the Stage 4 Construction Contract. Those risks that are financial in nature have been quantified using recognised risk management techniques.

The financial risks carrying the greatest impact in relation to the construction element are those that relate to the uncertainty of macroeconomic market conditions including COVID 19, unknown site conditions and connection to the existing service infrastructure.

5.2.11 External Financial Contributions to the Project

There are no other anticipated external partner financial contributions.

5.3 Statement of Overall Affordability

5.3.1 Provision in Financial Plans

NHSG is committed to the Project, and subject to the provision of additional SG funding in relation to the construction costs, depreciation and equipment, all revenue and capital implications of the Project will be reflected in the Financial Plans of the Board.

5.3.2 Construction, Equipping and Commissioning Costs

The construction related, equipping and commissioning costs of the Project are expected to be financed using additional SG capital funding.

The construction cost is forecast to be £3.691 million, subject to finalising the design and agreement to the Target Cost from the PSCP. Funding of this from SG requires to be agreed.

Equipping costs are estimated to be £1.8 million.

Commissioning costs are estimated to be £9k.

5.3.3 Recurring Revenue Costs

Additional recurring revenue costs will occur following the handover of the new facilities and are anticipated to be £1.094 million in the first full year of operation (2024/25). £0.254 million relates to additional depreciation and NHSG have requested that SG provide additional support for these costs. The balance of £0.84 million is recognised by the Board and will be considered and managed through existing budgeting and financial management arrangements.

5.3.4 Cash flow Phasing

The phase of costs associated with the delivery of the Project have been profiled to align with the current Programme for the Project.

Tables F10 and F11 consolidate the capital and revenue cash flows and funding requirements to support the Project during development and the first full year of operation.

Table F10: Costs – Cash flow

	2022/23	2023/24	2024/25	Total
	£000s	£000s	£000s	£000s
Construction Related Costs	2,000	1,691	0	3,691
Equipment	0	1,800	0	1,800
Commissioning Costs	0	9	0	9
Total Capital Costs	2,000	3,500	0	5,500
Additional Depreciation	0	191	254	445
Clinical Service Costs	150	750	782	1,682
Building Related Running Costs	0	29	58	87
Total Revenue Costs	150	970	1,094	2,214
Total Costs	2,150	4,470	1,094	7,714

Table F11: Funding – Cash flow

	2022/23	2023/24	2024/25	Total
	£000s	£000s	£000s	£000s
SG Capital Funding	2,000	3,500	0	5,500
SG (Waiting Time Improvement Plan/Access Funding)	150	779	840	1,769
SG Depreciation Funding	0	191	254	445
Total Sources of Funding	2,150	4,470	1,094	7,714

5.3.5 Sensitivity of Affordability

In assessing the affordability of the Project, consideration has been given to the impact of a 10% increase in costs, together with consideration of specific potential dependencies not outlined in Table F12.

Table F12: Sensitivity Analysis

Area	Impact £000's	Management
Capital Expenditure - Build	369	The build cost represents the latest iteration as the design progresses. A significant Contingency/Risk element is built in, but the final cost will not be known until the addendum to this case is submitted later in the year. Confirmation of the funding for the Capital cost will be provided therein.
Capital Expenditure - Equipment	180	Health Facilities Scotland are in direct discussion with the services to ascertain equipment quantities and specification. Costs are estimated based on their knowledge of current prices.
Recurring Revenue Costs	84	80% of the recurring costs relate to additional staff and is therefore a certainty. The staffing model has been developed by the Radiology Dept, which will deliver an 8 hour per day, Mon-Fri service.

5.3.6 Value for Money

The construction costs included within the business case have been scrutinised by external Cost Advisors (AECOM) as part of their due diligence towards their validation of the cost representing value for money at this stage. In particular, the elements making up the total capital cost have been compared with other similar comparator projects and existing market conditions. This has also included area benchmarking and a value engineering process. Moving forward to market testing, there is an expectation that further value will be applied to reflect competitive market testing.

As part of the cost development the Cost Advisor in conjunction with and NHSG also reviewed the Risk and Inflation allowances in the formal cost plan to ensure that these were appropriate for the project stage.

5.3.7 Agreed Accountancy Treatment

The new building and the equipment procured will be accounted for by NHSG as a non-current (fixed) asset.

The annual charge to the Statement of Comprehensive Net Expenditure (SOCNE) will consist of all building related running costs, clinical and non-clinical costs and depreciation. Depreciation is calculated on a straight line basis.

5.4 Written Agreement of Stakeholder Support

None required

6.0 The Management Case

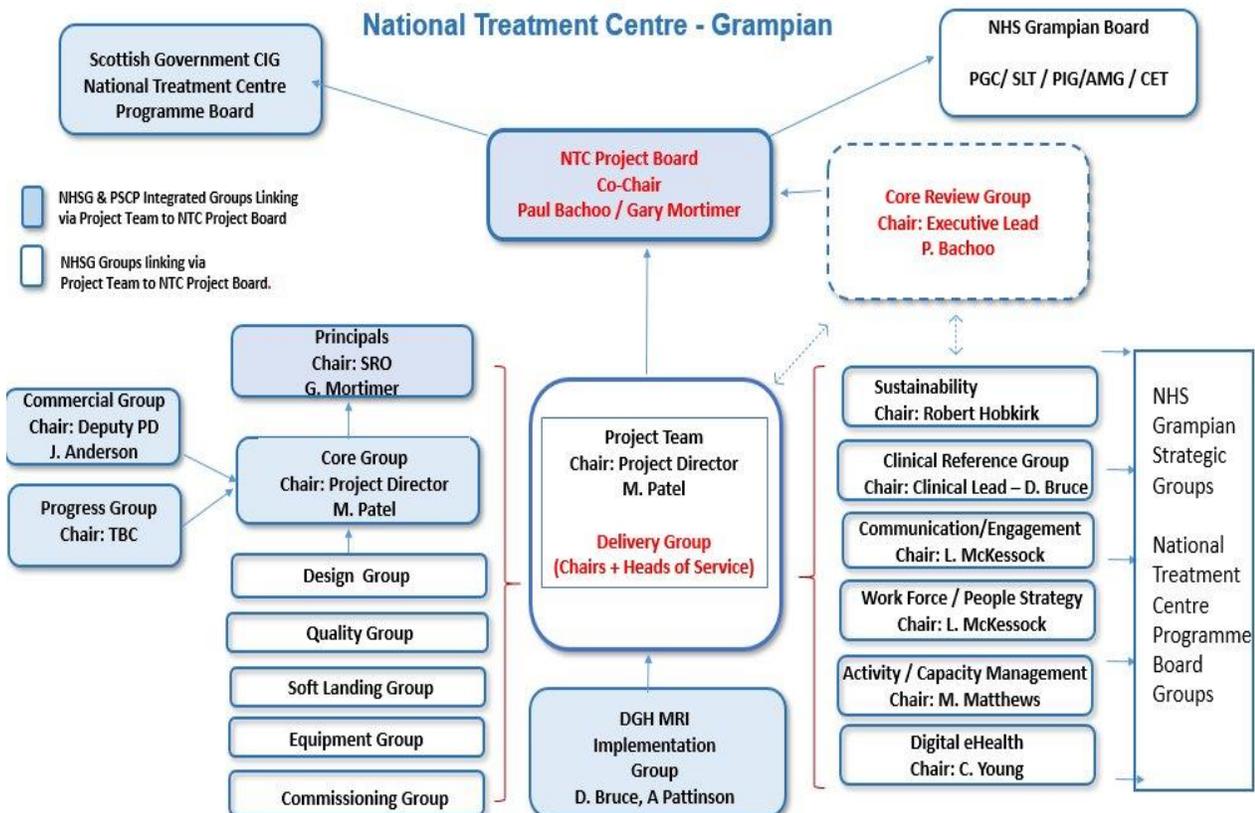
6.1 The Management Case

The purpose of the Management Case is to demonstrate that NHS Grampian (NHSG) is capable of successfully delivering this Project. This section sets out the arrangements in place to demonstrate that the organisation is ready to proceed to procurement and project implementation, and successfully deliver the Project.

6.2 Project Management and Governance Arrangements

The National Treatment Centre Grampian project management structure and governance arrangement remain the same as outlined within the OBC. The overarching governance arrangement for the National Treatment Centre MRI at Dr Gray's Hospital, Elgin project has been enhanced and consolidates key Dr Gray's Hospital operational representation and leadership. The project management and governance arrangements are shown in Figure 6.2.1. The National Treatment Centre MRI at Dr Gray's Hospital Project will follow an agreed project management approach, reporting into the agreed organisation structures as shown in Figure 6.2.1.

Figure 6.2.1
Overarching Governance Arrangement for the National Treatment Centre MRI at Dr Gray's Hospital in Elgin.



6.3 Change Management Arrangements

6.3.1 Key Roles and Functions

The Dr Gray's Hospital MRI Implementation Group has been established to provide assurance to the NTC Project Board, as part of the governance process for the project. Key aims of the Dr Gray's Hospital MRI Implementation Group are to assure:

- Oversight of the operational delivery of the project, specifically;
 - Support staff recruitment, training, development, evaluation, and research to create a sustainable delivery workforce model.
 - Supports the delivery of the Construction Programme, linking with both clinical and support services across the Dr Gray's Hospital site. Development in partnership, the operational plans to manage any decanting of adjacent clinical services e.g. Ward 4 (mixed sex acute mental health assessment ward).
 - Maintain alignment to both local and national strategic intentions, understanding the importance of a whole system approach, linking across NHS Grampian Health and Social Care, and 3rd Sector.
 - Delivers within an agreed financial model.
- Equity of access to imaging capacity is maintained for the population of Grampian and wider NoS including the Islands.
- Robust project governance arrangements are in place to ensure evidence of project progress, evidence of actions, issues for escalation and decision making processes.
- That the operational introduction and delivery of MRI services occurs through a transparent and robust framework of governance.
- The clinical gains and intended benefits described in the original business case are being realised.
- The provision of progress reports against the role and functions described to assure the NHSG Board.
- Provide reports as required to HSCP, national bodies, and other key stakeholders.
- Awareness of any service model changes in response to emergent local, regional, and national changing circumstances and priorities.
- Connectivity as appropriate across the various specialties and maximise potential opportunities for shared learning.

Key members of the Dr Gray's Hospital MRI Implementation Group is detailed in the Management Case appendices, which will be part of the addendum to the Standard Business Case (SBC) to be taken to a future Board meeting.

Key members of the Project Board that link with the Implementation Group are listed below.

<p>The Senior Responsible Officer is Gary Mortimer The Programme Director is Manju Patel The Clinical Lead is Professor Duff Bruce The Senior Operational Management Lead is Alasdair Pattinson</p>

Links are made via Dr Gray's Senior Team with:

- Moray Transformation Team
- Dr Gray's Senior Staff Committee and Clinical Forum
- Communication strategy and public and patient engagement
- Dr Gray's Hospital Infrastructure Group

6.3.2 Key Milestones

The key milestones are summarized within Figure 6.3.2(i). Operational delivery of the key milestones is reliant on successful planning around any adjacent clinical service decant options (Ward 4, mixed sex acute mental health assessment ward), on finalising the technical design aspects, costs and programme.

Figure 6.3.2 (i)

DGH MRI Standard Business Case Programme

Key Milestones	MRI Suite
	Moray
Clinical Brief	November 2021
Confirmed Brief & Appointment of PSCP	April. 2022
Workforce Plan	February 2022
Facility Design	April – end July 2022
Stand-alone standard business case	January – July 2022
NHS Grampian Board	August 2022
Stage 4 - Construction	
Mobilisation of PSCP + Enabling Works	Programmed to require 1 month
Construction Start Date	End 2022/Early 2023*
Construction Program	Approx 42 weeks**

* Operational delivery of the key milestones is reliant on successful planning around any adjacent clinical service decant options (Ward 4, mixed sex acute mental health assessment ward).

** Requires finalisation of detail around decant of adjacent clinical service (Ward 4, mixed sex acute mental health assessment ward) and construction logistics planning, -

6.3.3 Workforce Plans

Work is well advanced confirming the workforce required to support the project (Appendix 6.6.3). Links have been made to external parties to scrutinise the workforce plans in line with what is being planned across other NHS Scotland National Treatment Centres. This scrutiny process will be finalised and provided in the SBC addendum. Plans are in development to support recruitment and training of the additional workforce requirement for this new facility, in advance of the service becoming operational, in order that all the enhanced training is completed. There are recognised challenges in relation to medical staffing, and our workforce planning leads are linked to the appropriate forums on a regional and national basis to address these challenges.

Table 6.3.3 (i) below outlines the additional workforce requirement identified at the initial workforce planning stage.

Table 6.3.3 (i)

Dr Gray's MRI Additional Workforce Requirement

DGH - MRI Suite	
Role	WTE
Medical	
Medical - Consultant	1
AFC	
AFC - B9	0
AFC - B8D	0
AFC - B8C	0
AFC - B8B	0
AFC - B8A	0
AFC - B7	2.3
AFC - B6	2.5
AFC - B5	1.5
AFC - B4	0
AFC - B3	2
AFC - B2	1.5
Total	10.8

6.3.4 Training and Development Plans

The Training and Development Plan will include an outline of:

- Any service changes that are likely to include 'organisational change'
- How staff will be trained so that they are ready to work in different ways consistent with the overall redesign plans.

The Training and Development Plan is being developed to support delivery of the redesign plan and to ensure the safe commissioning and operation of the new facilities in line with the emerging Soft-Landing Plan.

The full detail relating to the training and development requirements can be found in the over-arching NTC (DGH) Workforce Plan.

6.3.5 Stakeholders Communication and Engagement Plans

Many people across Grampian will be positively affected by this proposal and their engagement in supporting and shaping how services are delivered now and in the future is very important to NHS Grampian and to the success of this Project.

To support appropriate engagement, a Communication and Engagement Framework is in place and informs the Project approach to engagement and communication activities. A dedicated Consultation and Engagement Advisor is in place to support all aspects of communication and engagement for the project. Whole system working, a key component of the "Plan for the Future", demonstrating joined up and connected links with and around people, is established within the Project and indicates stakeholder communication and engagement. In addition, a Communication and Engagement Group has been established to oversee the delivery of the Communication and Engagement Action Plan and ensure that the project adheres to national consultation guidance. The project specific Action Plan, outlining key communication and engagement activities, has been developed. It is a live document which is reviewed and updated regularly. An example of a recent Action Plan is shown in Appendix 6.3.5 and includes details of the target audience, methods of communication, timescale etc.

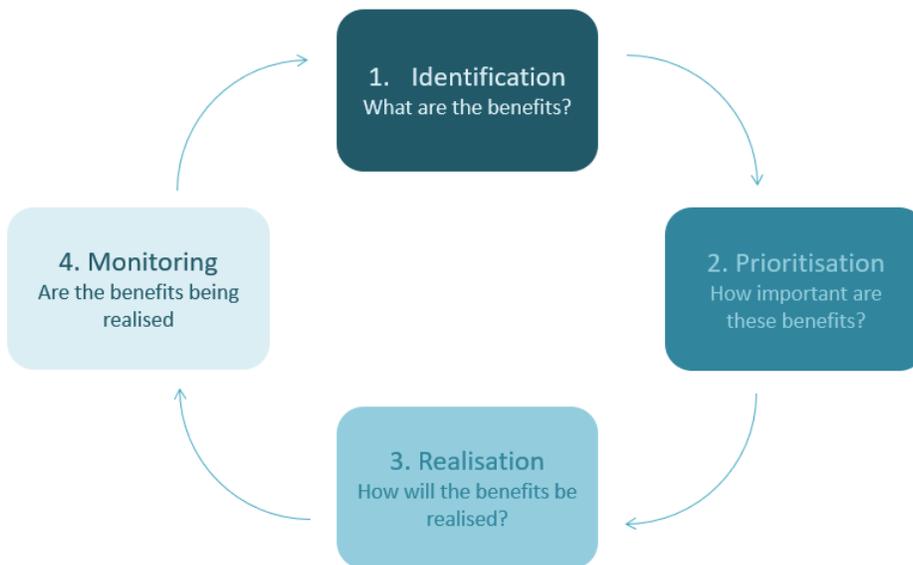
In addition, a stakeholder analysis was carried out and will be reviewed regularly to ensure all relevant stakeholders are engaged as the project progresses. This work will continue throughout the project, involving clinical staff, managers, public representatives, Third Sector groups and Healthcare Improvement Scotland Community Engagement.

6.4 Benefit Realisation.

The rationale for the investment is covered in the Strategic Case. The realisation of demonstrable benefits provide the evidence base that the proposal is worthwhile and that a successful outcome is achievable. Clinicians and staff across a range of services have been fully engaged with the whole process around service planning and visioning. A framework for wider engagement with stakeholders is also in place.

Benefits help to:

- Substantiate the case for investment
- Focus efforts on benefits with the greatest reward
- Engage with stakeholders to agree expected outcomes
- Manage risks associated with benefits realisation
- Create a framework for project evaluation



A Benefits Register and Benefits Realisation Plan have been produced to support the achievement of the benefits outlined for the Project. Significant work has been carried out as part of the project, to ensure that project benefits are appropriate and viable. Key benefits that will be assessed over the life of the Project and as part of the Project evaluation are:

- Improved patient and staff experience
- Performance benefits
- Environmental benefits
- Backlog maintenance opportunity savings
- Local community benefits

Qualitative patient and staff survey work will be scheduled throughout the lifetime of the project and will build on the conversations with a wide variety of stakeholders as part of the wider engagement work from the outset of the Project.

NHS Grampian has also recently commissioned the development of a comprehensive strategy for the future role and function of Dr Gray's Hospital (2023-2033). The strategy will describe and plan for the optimal role and function of Dr Gray's Hospital in the local community, for NHS Grampian and as part of a network of hospital across the North of Scotland region.

6.5 Project Risk Register

Effective management of project risks is essential for the successful delivery of any major project. A robust risk management process will be put in place and will be actively managed through the whole programme to reduce the likelihood of unmanaged risk affecting any aspect of the Project. Risk is managed within the service and the project team and a Risk Register has been developed to support actively managing risk. Oversight will be provided by the NTC-G Project Board, with implications being regularly examined and escalated via the Dr Gray's Hospital MRI Implementation Group and using the appropriate governance processes.

A summary of the top-rated project risks identified is provided below:

- Disruption due to construction works on a live site
- Agreement and management of critical programme dates
- Workforce
- Procurement and commercial risks

The Risk Register will be maintained as a dynamic document and is updated at key milestones, or as the need arises.

6.6 Commissioning

The commissioning process for this project will be organised as outlined in the OBC. For the purposes of this Business Case, the commissioning is covered over three distinct but interconnected headings:

- Soft-Landings Programme
- Technical Commissioning
- Functional (Operational) Commissioning

6.7 Monitoring and Evaluation

The project monitoring element will be undertaken over the life of the Project and will cover the technical aspects of the Project e.g., programme, cost, quality and health and safety.

Progress against the Implementation Plan will be reviewed regularly (weekly initially) by the Dr Gray's Hospital MRI Implementation Group. Reports will be provided to the NTC-G Project Board and Asset Management Group (AMG) and as appropriate to the Moray Health and Social Care Partnership. Clinical governance will be applied as per routine practice and policies within the Dr Gray's Hospital.

A Project Monitoring Plan will be developed that outlines the key areas to be monitored, it also outlines who is responsible for producing the monitoring materials and at what intervals. The monitoring reports will be reviewed, and any follow up action agreed at the appropriate governance level.

Key aims of monitoring:

- gaining a better understanding of whether the Project is running smoothly and to programme so that any corrective action can be taken in a timely manner
- enabling service plans/changes to progress at a correct pace to align with the Project programme
- better understanding of the risk contingency status (i.e., has some of it been used or not)
- better understanding of the impact of Project scope changes on costs and programme

6.8 Project Evaluation

Project evaluation is a key element of any project. It must be well planned and executed. Evaluation of the National Treatment Centre Dr Gray's Hospital, Elgin MRI Project will have two main strands:

- monitoring which involves the systematic review of project progress while it is proceeding
- evaluation, which is the process of evaluating the realisation of the expected benefits from the project as an indication of a successful outcome to the project

Monitoring and evaluation process which will be overseen by the NTC-G Project Board and the AMG.

An overview of achievement of the project's objectives, evaluation of impact, benefit realisation and learning along with recommendations for any future improvements will be contained within the Project Implementation Monitoring Report.

6.8.1 The Service Benefit Evaluation

The Service Benefit Evaluation will be undertaken once the Project has ended, staff and patients have settled, and the redesign agenda has had time to be fully implemented. It will cover the impact of the Project on service change and benefits realisation. The Project Benefits Register, Benefit Realisation Plan, Service Redesign Plan and Training and Development Plan will form a significant part of this assessment.

In relation to the Service Benefit Evaluation, a new process for this will be developed within NHSG to support a consistent approach to the evaluation of this Project and all other capital developments in Grampian. It is likely that the Service Benefit Evaluation will take approximately three months to complete, to allow time for data collection, report writing, internal review and lessons learned. The Service Benefits Evaluation will be undertaken one - two years after the facilities are commissioned and will focus on the benefits outlined in the Benefits Register.

Key aims of evaluation:

- demonstrates that the Project was worthwhile by, for example, achieving its strategic investment objectives, realising its expected benefits, and carefully managing its associated risks
- promotes organisational learning to improve current and future performance
- avoids repeating costly mistakes
- improves decision-making and resource allocation (e.g., by adopting more effective project management arrangements)
- recognises how the impact of good design can improve stakeholder satisfaction, service performance and the efficiency and effectiveness of the NHS Board's operations

The monitoring and evaluation process will be directed by the Dr Gray's Hospital MRI Implementation Group, overseen by the NTC Project Board. The project objectives, evaluation of impact, benefit realisation and learning along with recommendations for any future objectives will be contained within the Project Implementation Monitoring Report.