PROJECT REF/NAME	**Manufacturing Innovation Centre for Moray (MICM)**
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COMPLETED BY	**David Reid, Moray Area Manager, HIE**
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Approval **(choose from drop down menu)**	Choose an item.	
Comments	Any relevant comments from the approving authority should be documented here.	

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1. Executive Summary

What are the issues?

Manufacturing employs over 5,600 people in Moray in 215 businesses[1]. Some 19% of total jobs in the area are in manufacturing compared to 8% for Scotland as a whole. Employment in food and drink products account for 10% of total jobs in the Moray economy[2]. Wages in Moray are below the Scottish average. The average annual gross full time mean wage is £31,987, 8% lower than for Scotland (£34,936). The gap widens to 13% when all (full time and part time) jobs are included (£24,879 compared with £28,660 for Scotland[3]).

The locality has a strong base of skills in manufacturing and engineering. Some 50 out of the 135 whisky distilleries in Scotland are in Moray[4]. The area is also home to the global headquarters of several household brands. However, over 67% of businesses employ nine people or less[5] and many lack the resources, and particularly the knowledge, to execute R&D capital projects and secure the benefits of enhanced productivity. In 2020 Moray ranked fifth lowest of all local authority areas in Scotland in relation to spending on business enterprise research and development (BERD) as a proportion of GDP (0.16% of GDP in 2020 versus a Scotland average of 0.92%)[6].

How will we fix the issues?

What is required is a grass roots cultural shift in how businesses gain insight into the latest process and production efficiencies that are available, and how they can use them to undertake product and process innovation. It is considered that there is an urgent need for investment in a **Manufacturing Innovation Centre for Moray (MICM)** that will act as a local focal point for business to access best practice and, crucially, help them to collaborate with universities and other research institutes, and support them in accessing relevant support from organisations such as Highlands and Islands Enterprise (HIE), National Manufacturing Institute Scotland (NMIS), Scottish Manufacturing Advisory Service (SMAS), Interface (the knowledge connection for business), the Scottish Innovation Centres, the Advancing Manufacturing Centre at Fort William[7], Make it Smart Hub for Construction at UHI Inverness[8] and others such as UHI Moray's MAATIC and Business Enterprise Hub projects.

To be effective MICM must cover multiple sectors, from textiles to distilling, and be positioned as "by industry, for industry" to have the necessary credibility to persuade

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[1] https://www.gov.scot/publications/businesses-in-scotland-2022/documents/

[2] Moray's Economic Strategy (2022). http://www.moray.gov.uk/downloads/file147200.pdf

[3] Moray's Economic Strategy (2022). http://www.moray.gov.uk/downloads/file147200.pdf

[4] https://seemoray.co.uk/things-to-do/distilleries/#:~:text=Moray%20is%20home%20to%20the,in%20this%20relatively%20small%20area

[5] https://www.gov.scot/publications/businesses-in-scotland-2022/documents/

[6] https://www.gov.scot/publications/business-enterprise-research-and-development-2020/ (local authority estimates are not currently available beyond 2020)

[7] https://www.whc.uhi.ac.uk/business/advancing-manufacturing/

[8] https://www.mis-hub.com/

businesses to invest in innovation and their transition to net zero. It also must be local – large facilities located in distant cities need a local presence to customise and make their services accessible to rural businesses. MICM will support businesses to keep abreast of emerging technologies, showing their relevance, and supporting their deployment, leading to improved production outcomes and profitability as well as faster decarbonisation. It will also help local businesses to understand more about their local supply chains and the benefits from involvement in the relevant clusters of business activity. In doing so it will make a clear, direct contribution to achieving the objectives set out in Scotland's National Innovation Strategy[9].

Who is involved?

The project is led by Highlands and Islands Enterprise (HIE) and has been guided by a Project Board comprising HIE, National Manufacturing Institute Scotland (NMIS), University of the Highlands and Islands (UHI) Moray, Moray Council, Scottish Manufacturing Advisory Service (SMAS), Scottish Government's Advanced Manufacturing Team and private sector manufacturers in Moray.

How did we identify the solution?

An initial assessment of a long list of options was undertaken to support the preparation of the Strategic Outline Case for the project in 2019. These options were refined further as part of the development of the Outline Business Case (OBC) in 2021 and, following approval to a number of Change Requests, have been subject to further detailed design as part of this Full Business Case (FBC) process.

The project development process has been informed by a review of the supply side delivery of innovation support and demand-side surveys of manufacturing businesses of all sizes as well as consultation workshops with the Moray Growth Deal Business Assembly and the Moray Chamber of Commerce. This has clearly evidenced the need for, and benefits from:

- Enhanced co-ordination of innovation support targeted at manufacturing business;
- The need to encourage much stronger interaction between manufacturers and the knowledge base and the ways in which access can be enhanced;
- Meeting the property needs of new manufacturing start-ups, in particular the need for flexible unit sizes on easy in, easy out terms, and accelerator grow-on space on flexible terms for them once they have "graduated" from incubation space;
- Enhanced business services to support decarbonisation

[9] https://www.gov.scot/publications/scotlands-national-innovation-strategy/pages/1/

What is the solution?

Following the supply-side and demand assessment work conducted at this FBC stage, the MICM Project Board met to review the project's investment objectives and agree how the project should be positioned to maximise its added value within a complex delivery landscape.

The MICM service solution is set out in Figure 1.1 on the following page.

In the period since the preparation of the original MICM OBC there has been substantial change to the MAATIC Growth Deal project and its geographical location. Therefore it has now been decided that MICM should be located at the Enterprise Park Forres as a stand-alone facility adjacent to other manufacturing businesses, including those at the heart of the North Coast Space Cluster, as well as taking advantage of existing conference facilities at Horizon Scotland.

There will continue to be close collaboration between MICM and MAATIC as well as with the Business Enterprise Hub (BE Hub) project. In parallel with MICM's FBC, the MAATIC and BE Hub projects have also been developing their own FBCs. As outlined at the OBC stage, MICM intends to work closely with both projects to optimise the customer journey for both businesses and individual entrepreneurs. In relation to MICM/MAATIC engagement, this will mean that where MICM engagement identifies skills needs, it will facilitate rapid access to relevant advanced manufacturing skills support through MAATIC in the first instance. The same will apply where it identifies management training and broader entrepreneurship skills development needs, where it will signpost to BE Hub. MAATIC and BE Hub have also mapped out the customer journey for referrals *into* MICM, which will provide innovation services and facilities to support entrepreneurship activity, both with MAATIC students (including professional doctorate students) and BE Hub manufacturing service users who need product and process innovation support.

In parallel with the detailed design process, three Change Requests have been approved for MICM since the OBC stage. These approved a change in project location from land adjacent to RAF Lossiemouth to Enterprise Park Forres as well as approving the principle of using existing premises to facilitate a more rapid start to the project. The most recent Change Request was approved by the MGD Board in May 2023 and validated by the MICM Project Board at an options workshop in June 2023. This specified the following options for appraisal.

Option 1: Business as Usual – Do Nothing – No Growth Deal Funding

Option 1 is the Business as Usual option that assumes no Growth Deal funding. This is the Reference Case against which the performance of other options can be judged. Under this scenario and given the tight fiscal environment and other funding priorities, MICM would not happen. Project development costs have been incurred to bring the MICM project to FBC stage (£134,000). These sunk costs are included in Option 1.

Figure 1.1: Manufacturing Innovation Centre for Moray (MICM) project – service solution

Investment Objectives:

- To increase BERD (Business Enterprise, Research and Development) in Moray's indigenous manufacturing companies
- To increase growth, productivity, and efficiency in Moray's indigenous manufacturing companies
- To increase the number of manufacturing start-ups in Moray
- To support the attraction of manufacturing inward investment to Moray.
- To accelerate the transition to net zero in Moray's indigenous manufacturing companies

Core service offer:

Playing an active role in cluster management (advanced manufacturing, multi-sector)
Developing a detailed assessment and baseline of productivity and net zero performance, needs and opportunities for each manufacturing business
Effectively co-ordinating service delivery (deploying HIE, UHI (MAATIC), NMIS, SMAS, Interface, Innovation Centres, Business Energy Scotland etc.), guiding/steering businesses to the best solution for them and the most suitable providers
Supporting product and process innovation projects in businesses

Key tasks:

Sector leadership: inspiring, assessing needs, co-ordinating, persuading, joining up
Awareness: marketing, promoting, demonstrating, organising events
Technical: demonstrating equipment and new technologies with MICM buildings as net zero

Property:

MICM HUB (Unit 9, Enterprise Park Forres)				**MICM Grow-on space** (Unit 10 and adjacent new build expansion, at Enterprise Park Forres) 4 industrial units totalling 793 sq. m
6 x 40-70 sq. m incubator units	Demonstration and technical space	Net zero demonstrator	Service provider and private sector desk space	

Horizon Scotland (existing events space to be used by MICM)
Wider space cluster activity

In addition to Option 1, two intervention options have been appraised as part of the Full Business Case. The options are identical in relation to service offer (and thus revenue model) but take a different approach to the delivery of the capital project.

Option 2: Phase 1 MICM Hub (in refurbished premises) and Phase 2 grow-on space (mix of refurbished premises and new build)

In this option the MICM Hub (Phase 1) would be provided quickly through a reconfiguration of the HIE-owned Unit 9 at Enterprise Park Forres. This light industrial unit was constructed in 2009, is heated using ground source heat pumps, and is about to be vacated by a growing electronics manufacturer which is in the process of expanding elsewhere on the Park. The design of this building with a ground floor, mezzanine and sloping roof, has made it difficult to let on a sustainable basis for manufacturing, but its internal layout lends itself well to the MICM requirement.

With relatively limited reconfiguration required (the work package will be set out in detail in the Commercial Case), the capital works on the MICM Hub would be complete during 2024. These works will also allow the MICM Hub to act as a net zero demonstrator, with sensors and measurement displays helping to explain how businesses can improve their existing premises in a cost-effective manner as they embark on their own net zero transition.

The intention is for a MICM Director to be appointed in spring 2024. They will start developing MICM's presence with local business immediately and ensure that the project can progress quickly as soon as the MICM Hub is available. The Director's work will include active co-ordination with service providers (notably NMIS, SMAS and Interface) to ensure a regular presence at MICM and their involvement in organisation of MICM events, as well as liaison with MAATIC, BE Hub, Business Gateway and the HIE Moray Area team to market the six incubator units (40-70 sq. m each) and other flexible workspace.

The MICM Hub will also have a technical and demonstration space that features a range of specialist prototyping and testing equipment (e.g., 3D printing), helping it to play an active role in supporting product and process innovation for business as well as demonstrating relevant, accessible technologies and persuading them to invest in their internal processes to move up the innovation and net zero ladders. A MICM Centre Manager will be appointed by the MICM Director by autumn 2024 to take on the responsibility of managing MICM's technical and demonstration activity and part-time administrative/marketing support will also be recruited during Year 1 of operation.

The provision of MICM grow-on / accelerator space in Phase 2 will support the MICM customer journey for those businesses in Hub incubators, enabling them to move on to larger modern industrial premises on Enterprise Park Forres while remaining part of the "MICM family" with continued access to MICM Hub support as required. Once again, the project is following the principle of repurposing existing building rather than new build. Here the proposal is for existing commercial premises at HIE-owned Unit 10 (already fitted with air source heat pumps) to be reconfigured to three units of approximately 150 sq. m, supplemented by a 250 sq.m new build unit with air source heat pumps and solar PV panels. The new unit would be on land immediately

adjacent to Unit 10 owned by HIE with outline planning consent for industrial use. These units are a very short walk from Unit 9 / the MICM Hub and at the very heart of Enterprise Park Forres, adjacent to Orbex and the emerging space cluster. The intention is to have these units ready for occupation from 2027/28, in Year 4 of the MICM Hub's operation, by which time it is anticipated that one or more occupants from the incubator space will be looking to move on to larger premises.

MICM incubator and grow-on units will all be let at market rents, but will be provided on "easy in, easy out" terms. Flexible lease terms, and the inherently higher risk profile of new start-up or early stage businesses, are not an attractive proposition to property developers. In Moray there is little speculative development of even mainstream premises for established businesses on standard leases. This is why, in Option 1, without Growth Deal funding, nothing would be delivered. Crowding out is not a concern given this specialised floorspace.

It is always difficult to demonstrate demand in markets that do not currently exist, but there is clear evidence of unmet demand for incubator space in Moray. Horizon Scotland is at 110% occupancy with a waiting list with some businesses there now having to occupy meeting rooms. The proposed MICM incubator space is also entirely complementary to the activities of MAATIC and the BE Hub project in Elgin. The former will provide desk space for researchers and the latter will provide pre-incubation space for start-ups across all sectors as well as wider management skills support for established entrepreneurs.

A key feature of MICM's operation is to facilitate access by as many existing businesses as possible to practical manufacturing innovation support that will make a difference to their bottom line. MICM will actively co-ordinate existing service delivery to ensure that business access expertise and funding already available from HIE, the National Manufacturing Institute for Scotland (NMIS), the Scottish Manufacturing Advisory Service and Innovation Centres as appropriate to each case. It is anticipated SMAS, NMIS (operated by the University of Strathclyde) and Interface will be present at MICM on a regular basis and actively involved in supporting delivery and that there will be well-established links and cross-referral mechanisms with MAATIC and BE Hub as described above. This proactive collaboration will lead to Moray businesses developing more collaborative R&D projects and Knowledge Transfer Partnerships to translate ideas into workable prototypes, accessing NMIS, relevant Innovation Centres and Catapult facilities as needed.

MICM will stimulate demand through targeted engagement and free demonstration activities and events as well as a free initial diagnostic service in a concerted effort to maximise interest and take-up. The business survey detailed in the Strategic Case shows a clear, unmet demand for practical "how to" support. The MICM business model assumes that MICM will charge on a consultancy basis for specific project support to individual businesses. The revenue model also assumes that as it gains momentum, MICM will attract private sector funding from OEMs to support its delivery activity.

By re-using two existing buildings the project can proceed more quickly and at lower capital cost than new build. From a net zero perspective, this approach will also offer a much better demonstration to other businesses of how existing commercial

premises can be upgraded. Importantly it will also consume less embodied carbon in the construction process. It will be an immediate statement of MICM's intent to show businesses how they can make important incremental changes to decarbonisation in ways that have a positive impact on the bottom line. This will compliment MICM's wider efforts to support businesses in decarbonising in their operations.

Option 3: Phase 1 MICM Hub (in new premises) and new Phase 2 grow-on space

Option 3 assumes the same concept, service provision, floorspace configuration and equipment specification as Option 2. However, in this option, the MICM Hub is a new build. This accords with the approval to Change Request 3 (May 2023) that a new build comparator should be included in the FBC. Although it would provide new premises, Option 3 will be significantly more expensive in capital expenditure terms and will consume much more embodied carbon in the process.

How will the benefits accrue?

The benefits fall into the following main categories:

- One-off benefits from the construction process and procurement of equipment (Options 2 and 3). These temporary benefits are excluded from the value for money calculation (in line with OCEA guidance at OBC stage);
- Operational benefits associated with the ongoing operation of MICM, its employment of three staff (2.5 FTEs) as well as occupancy of the incubator units;
- Catalytic, or further generated benefits, associated with:
    - The additional penetration of innovation support services amongst indigenous manufacturing businesses in Moray and enhancements to their performance (Options 2 and 3)
    - Business acceleration benefits arising from the graduation of businesses from MICM Hub incubators and their further growth, facilitated by the MICM grow-on units (Options 2 and 3)
    - Additional inward investment to Moray resulting from the cluster development activities attributable to MICM's innovation activity.

In addition to the employment, income and GVA impacts of MICM, a RICS Whole Life Carbon Assessment will be commissioned for Option 2 as part of the detailed design process for the initial phase involving Unit 9. The embodied carbon and operational carbon disbenefits of both options will form part of the value for money assessment in the final version of the FBC when this is submitted.

Is it financially sustainable?

Yes. Business plan forecasts for the preferred option, considering the full range of revenue costs (e.g., salaries and overheads) and revenue income potential (adopting cautious assumptions regarding build-up of incubation and grow-on space occupancy), suggest that it could be self-sustaining within 10 years of opening.

However, this is dependent on the provision, and successful take-up, of incubator and grow-on floorspace as well as MICM becoming established as a provider of manufacturing innovation consultancy support for small and medium sized manufacturers in Moray.

How does the project fit in the strategic landscape?

MICM will make a direct contribution to national, regional, and local manufacturing innovation objectives.

At the UK level, the vision in the UK's recently published Innovation Strategy[10] (2021) is to turn the United Kingdom into the world's most innovative country.

In Scotland, building the innovation capabilities of Scottish manufacturing is highlighted as a priority in the Scottish Government's manufacturing recovery plan[11] (2021) and its 10-year National Strategy for Economic Transformation (NSET) published in March 2022[12]. Scotland's National Innovation Strategy was published in June 2023[13] which up-dated the 2016 Manufacturing Action Plan, building on NSET, highlighting the importance of building on clusters. These clusters focus on those in which Scotland is considered to have major advantages, including energy transition, health and life sciences, data and digital technologies and advanced manufacturing, with specific roles identified for NMIS and the National Robotarium. The university sector is also identified as having a major role to play in terms of investing in commercialisation research, including a new Investment Fund.

MICM is designed to provide a place-based response to both the UK and Scottish Government's innovative objectives. It fits directly with several of the key strands in NSET and the Scottish National Innovation Strategy where it offers a clear and significant contribution to the 'productive businesses and region' strand with its focus on innovation and connecting businesses to manufacturing innovation infrastructure, regionally and Scotland-wide. The establishment of MICM will also enhance the capacity of local businesses to compete in new and emerging markets, generating good quality employment prospects and career development opportunities for the existing workforce as well as new entrants. If the right connections can be established, a more skilled workforce will be one of the outcomes, particularly arising through links with MAATIC and UHI Moray as well as and other institutions such as NMIS and Strathclyde University.

At a regional level, MICM will directly support the "Prosperity," "Planet" and "Place" pillars of HIE's Strategy 2023-28 and help to deliver three out of four of its outcomes. The Prosperity pillar identifies innovation as key to improving productivity, competitiveness, profitability and entrepreneurship. It is recognised that businesses are not sufficiently engaged in R&D to drive performance and growth, and that developing and accessing skills can be a challenge. The region has considerable existing, and planned, innovation, infrastructure and links to national enablers such as NMIS and Innovation Centres, which will be a catalyst for sectoral growth and

[10] https://www.gov.uk/government/publications/uk-innovation-strategy-leading-the-future-by-creating-it

[11] https://www.gov.scot/publications/making-scotlands-future-recovery-plan-manufacturing-business-regulatory-impact-assessment/#:~:text=The%20actions%20set%20out%20in,new%20technologies%20and%20training%20opportunities

[12] https://www.gov.scot/publications/scotlands-national-strategy-economic-transformation/

[13] https://www.gov.scot/publications/scotlands-national-innovation-strategy/

development, advanced manufacturing, the just transition to net zero and business and academic collaboration. However, HIE's Strategy recognises that this infrastructure needs to be harnessed effectively to meet business need in local areas. The Place pillar seeks to develop business and innovation infrastructure, collaborating with stakeholders to identify needs, promote innovation and deliver new property assets that will contribute to its outcomes and interventions will be focused on projects which aid the delivery of regional transformational opportunities. Under its Planet pillar, the focus is on taking every opportunity to raise awareness of the need for decarbonisation amongst all key stakeholders and increase the economic and social benefit from the transition to net zero. At local level MICM is also aligned to HIE's Property Strategy, particularly in relation to the reuse of existing buildings and the transition to net zero.

What else is happening in the region?

Moray is the manufacturing focus of the North Coast Space Cluster (NCSC). Orbex operates a launcher production facility at Enterprise Park Forres, designing and building the rockets that will launch from Sutherland Spaceport. Orbex is at the centre of a new cluster of local businesses providing services and products to the growing space sector and using data for commercial purposes and academic research[14]. Sited adjacent to Orbex, the MICM Hub, its wider programme of events and support and the MICM grow-on space will provide a strong innovation dimension to cluster development activity.

At a local level, MICM also fits well with the objectives of the recently published Moray Economic Strategy (2022) particularly in enhancing the productivity of the manufacturing sector and growing wages. As the Strategy makes clear '*innovation through automation and new work processes (including artificial intelligence) will also be required. These will, in some sectors, help to offset limited availability of workers. This will include traditionally important sectors such as food and drink manufacturing (and its supply chain) and timber processing.'*

Finally, as with other Moray Growth Deal projects, MICM provides a real opportunity to show how Growth Deal activity can be integrated with, and contribute to, national, regional, and local planning policy as it seeks to meet new imperatives and add real additionality in the outcomes that are secured from new investment in the local economy.

MICM is well aligned with the current National Planning Framework (NPF4) and Scottish Planning Policy (SPP). Building on the Planning Act (S) Act 2019, NPF4 indicates that planning should be underpinned by the six underlying principles of just transition, conserving and recycling assets, local living, compact urban growth, rebalanced development, and rural revitalisation. Scottish national spatial planning policy applies these six principles in supporting the planning and delivery of sustainable places (seeking to reduce emissions, restore and better connect biodiversity); liveable places, enabling people to live better, healthier lives; and productive places, underpinned by a greener, fairer, and more inclusive wellbeing economy.

[14] https://www.hie.co.uk/latest-news/2022/february/17/space-sector-set-to-create-new-jobs-in-highland-and-moray/

In relation to the planning and delivery of productive places, the NPF4 guidance would appear to support MICM, and the project also directly addresses the objective of conserving and recycling assets (re-use of Unit 9 in Option 2) as well as contributing to rebalanced development and rural revitalisation. MICM's net zero demonstrator role also fits well with NPF4 objectives.

Appropriate attention is also being given to supporting the Town Centre First principle with an example of this being the coordination between the MICM, MAATIC and the Enterprise Hub projects to ensure appropriate alignment: MICM is deliberately based at Enterprise Park Forres to be at the heart of the emerging space cluster, whereas MAATIC and the Business Enterprise Hub are focused on Elgin to ensure that student activity in the city is maximised.

All the MGD projects are embedded in the indicative regional spatial strategy (iRSS) as submitted to the Scottish Government in September 2020. Moray Council's Strategic Planning and Development Manager is on the Moray Growth Deal Board and is actively engaged with HIE staff in "pre" pre-application discussions, which includes master planning processes, active travel, access to transport and ensuring that the Place Principle is appropriately embedded in proposals.

The proposal for MICM, including the efforts made by HIE, UHI and other partners to co-ordinate its design within other Moray Growth Deal projects such as MAATIC and the BE Hub, fits well with the national, regional, and sub-regional strategic landscape summarised above. It seeks to enable Moray companies to undertake more innovation to increase their existing turnover and increase their productivity by realising the opportunities available to them from new advances in technology and automation. As a rural region with a relatively small existing population, Moray has the infrastructure capacity to accommodate increased population that may arise from increased employment created by MICM. The complementary Housing Mix Delivery project is focusing on the delivery of affordable housing.

Economic Case: Value for Money and the Preferred Option

An economic appraisal for the two intervention options is provided in Table 1.1. This presents the Present Value of a 15-year stream of the GVA and carbon impacts at the Moray level, the associated Present Value of Net Costs over the same period (after adjustment for Optimism Bias), the resulting Net Present Social Value and the Benefit Cost Ratio.

Option 2 has a higher Benefit Cost Ratio than Option 3 and a higher Net Present Social Value. Option 2 is cheaper in capex terms because it repurposes Unit 9 (MICM Hub) and Unit 10 (the majority of the MICM grow-on space). Although not reflected in the relative benefits (which have been modelled to be identical), Option 3 will also take 9-12 months longer to achieve an operational start, since it would require a more complex detailed design process and it is reasonable to expect that achieving a building warrant would take longer, in addition to a longer build period.

Table 1.1 also presents switching values for both benefits and costs. Based on 15 years of benefits and costs at the Moray level, it would take a reduction of 84% in the benefits before Option 2 had a BCR of 1:1 and costs would need to increase more than six-fold. This demonstrates the strong resilience of the value for money of this option to potential changes in costs or benefits.

Table 1.1: Appraisal Summary Table - 15 years at the Moray level

		Option 2 MICM Hub re-using Unit 9 / and Unit 10 / new grow-on space	Option 3 Full new build of MICM Hub and grow-on space
A	Present Value(2023/24) of GVA benefits and carbon disbenefits £m	£40,144,579	£39,947,076
B	Present Value (2023/24) Net Additional Capital and Revenue Costs (£m) (over and above Option1, and adjusted for Optimism Bias)	£6,234,244	£12,385,869
C	Net Present Social Value (£m) [A-B]	£33,910,335	£27,561,207
	Benefit Cost Ratio [(A / B]	6.4	3.2
	Switching Value Benefits (% reduction in PV of benefits for BCR to be less than 1)	-84%	-69%
	Switching Value Costs (% increase in PV Costs required for BCR to be less than 1)	643.9%	322.5%

Note 1: benefits are the operational and catalytic GVA benefits of MICM and capital and operational carbon disbenefits; the temporary GVA benefits arising from the project's construction are excluded from the NPSV and BCR analysis
Note 2: costs and benefits are over and above the Option 1 No MGD funding reference case
Note 3: costs and monetised GVA benefits and carbon disbenefits have been discounted at a rate of 3.5% (the Social Time Preference Rate) to a base year of 2023/24 (year 0), the year of appraisal
Note 4: 15 years means the period starting in year 1 2024/25 and ending in year 15 2038/39

Table 1.2 shows the relative performance of Option 2 over 10, 15 and 25 years. The performance of Option 2 becomes even more apparent over a 25-year period once all the benefits are fully on stream. Over a 25-year period Option 2 is forecast to have a Benefit Cost Ratio of 9:1 at the Moray level and 11:1 at the Scottish level.

Table 1.2: Appraisal Summary Table – Preferred Option (Option 2): Present Value of net additional costs and net additional GVA benefits and carbon disbenefits over 10, 15 and 25 years at the Moray, Scotland, and UK levels

	Over 10 years	Over 15 years	Over 25 years
Present Value (PV) net additional costs of Option 2 (adjusted for OB on capital costs)	£6,119,769	£6,234,244	£6,411,783
PV net additional benefits for Moray (incl. carbon, excl. construction)	£27,356,451	£40,144,579	£57,739,169
PV net additional benefits for the Highlands & Islands	£30,470,080	£45,063,149	£65,618,333
PV net additional benefits for Scotland	£28,145,231	£44,485,982	£70,802,141
PV net additional benefits for UK	£17,239,323	£31,092,176	£56,680,003
Benefit Cost Ratio (BCR) – Moray	4.5	6.4	9.0
BCR – H&Is	5.0	7.2	10.2
BCR – Scotland	4.6	7.1	11.0
BCR – UK	2.8	5.0	8.8
Net Present Social Value – Moray	£21,236,682	£33,910,335	£51,327,386
Net Present Social Value - H&Is	£24,350,312	£38,828,905	£59,206,550
Net Present Social Value – Scotland	£22,025,463	£38,251,738	£64,390,359
Net Present Social Value – UK	£11,119,554	£24,857,932	£50,268,221

Option 2 is the preferred option in Value for Money terms. It delivers the same level of benefits more cheaply, faster, repurposes existing buildings and in doing so consumes less embodied carbon in the construction process.

While GVA analysis forms an essential part of the economic appraisal, it is worth highlighting that in employment terms (excluding construction effects):

- By year 10 Option 2 is expected to generate over 600 net additional job years of employment at the Moray level (over 700 job years at the Highlands and Islands level, over 800 job years at the Scottish level and over 600 job years at the UK level).
- By year 15 this is forecast to have grown to almost 700 net additional job years for Moray (more than 800 job years at the Highlands and Islands level, almost 1000 job years at the Scottish level and over 700 job years at the UK level)
- By year 25 it is estimated that MICM could deliver almost 800 net additional job years in the Moray economy (over 950 at the Highlands and Islands level, over 1,100 job years at the Scottish level and over 900 job years at the UK level).

How much will it cost?

Table 1.3 shows how the capital expenditure requirement (with an allowance for future inflation) has changed from OBC stage. The FBC's preferred option for MICM (Option 2) will have a capital cost of £5.61 million (including contingency and inflation allowance). This is lower than the £6.89 million anticipated at OBC stage due to the repurposing of existing premises. Based on the funding shares established at OBC stage, of the new total capex requirement Moray Growth Deal funding is anticipated to provide just over £3m (£2.44m from UK Government and £0.61m from the Scottish Government) with HIE investing £2.56m (net) to cover the balance.

Table 1.3: Option 2 (preferred option) – capital funding requirement and funding strategy, including inflation

	OBC capital funding strategy	Anticipated FBC capital funding strategy
Highlands and Islands Enterprise	3,142,000	2,557,010*
Scottish Government	750,000	610,362
UK Government	3,000,000	2,441,448
Total	**6,892,000**	**5,608,820**
* Note: In addition, the capital model assumes that HIE will provide grant-in-aid funding of £550,000 to a new MICM entity at the end of the Growth Deal period to acquire the MICM Hub and Grow-on assets from HIE (see *How will it be delivered?*)		

MICM is forecast to become financially sustainable within ten years of opening. Until its revenue-generating capacity comes fully on stream, it is forecast to require revenue deficit funding totalling £1.25m to December 2031 (from the Scottish Government's £1.25m revenue contribution to the project). In the event that the deficit position extends beyond the Growth Deal, HIE will be responsible for managing any additional revenue deficit. Table 1.4 shows an income and expenditure profile for the project from January 2024 to December 2031 when the

Growth Deal ends, showing how, as income builds up, MICM is expected to become self-sustaining by the end of the period.

Table 1.4: Option 2 (preferred option) – revenue income and expenditure including inflation

Growth Deal Year	3	4	5	6	7	8	9	10	To Dec 31
MICM year	0	1	2	3	4	5	6	7	
Financial year	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Income	0	21,975	122,526	192,341	262,470	316,548	394,260	441,231	452,262
Expenditure	47,388	328,261	395,946	443,965	410,894	421,167	491,361	442,488	432,655
Expenditure minus income (surplus is negative)	**47,388**	**309,173**	**276,423**	**254,703**	**151,580**	**107,853**	**100,416**	**4,655**	**-19,607**

Importance sources of income for MICM include the following:

- Rental income from incubator units in the MICM Hub and the MICM Grow-on units
- Rent of other desk spaces by service providers and the private sector in the MICM Hub
- Revenue from project consultancy services to manufacturing SMEs.

These will take time to develop. There are clear interdependencies between the capital model (which creates assets to generate an income stream) and revenue funding to help stand the project up in its initial phase, while income streams develop to their full potential.

How will it be delivered?

HIE will lead the project. It will design and procure the refurbishment of Unit 9 and of the subsequent phase of grow-on units (Unit 10 and new build).

It is anticipated that, subject to FBC approval, tender pricing for the first phase would be available in early 2024, enabling works to commence prior to the end of the 2023/24 financial year (subject to final approval of tendered prices). Detailed design and tendering of the second Phase will be designed and tendered in 2026/27.

Capital risks are low due to HIE's long experience of property development, its ownership of Units 9 and 10 and of the land adjacent to Unit 10. Risks are further mitigated by the fact that Enterprise Park Forres is already zoned for these types of developments.

Until the end of the Growth Deal period MICM will be managed as a HIE project, governed by a Project Board and with the HIE Area Manager as Senior Responsible Owner. From a MICM operational delivery perspective, HIE is currently exploring ways in which the impact of MICM staffing proposals can be mitigated to avoid adding to HIE's head count. Options being explored include setting MICM up as a project within HIE with its own dedicated, fixed-term project staff, or an outsourced Contract for Services. Whatever option is pursued, the management of MICM would

sit within HIE's Moray Team, supported by HIE's Innovation, Growth Deal and FM/Property Teams.

As MICM builds up its revenue streams and approaches self-sufficiency, HIE will work with the MICM Project Board on a transition plan that will lead to MICM becoming a standalone entity by 31st March 2031. Any decisions on the structure and stakeholders engaged in any such entity and on related asset transfer arrangements will be made with the explicit agreement of the Moray Growth Deal and Scottish Government and UK Government stakeholders.

2. The Strategic Case

Organisational overview

The vision for the Moray Growth Deal is built on 4 pillars; Connections; Business Support, Skills, and Employability; Moray the Place/Brand; and Moray's Priority Business Sectors. The MICM project falls under the Priority Business Sectors category.

MICM is being developed by Highlands and Islands Enterprise (HIE). The Senior Responsible Owner (SRO) is HIE's Area Manager for Moray who chairs a Project Board with representatives from HIE, UHI Moray, Moray Council, NMIS, SMAS, Scottish Government's Advanced Manufacturing Team and private sector manufacturers in Moray.

The strategic context

Fit with the UK Government's Industrial Strategy

The key UK Government policy of relevance to manufacturing remains 'Build Back Better: our Plan for Growth'[15] produced in March 2021 which notes that *"the UK has a lower proportion of innovating firms overall than other advanced economies and weaker business investment"*. The analysis identifies perceived market failures in UK manufacturing including:

- lack of access to capital in comparison to other markets;
- regional inequalities within the UK in terms of labour market skills and access to capital;
- the slow adoption of digital technologies.

Building innovation capacity is seen as essential to the growth of the UK economy. In the 2021 'UK Innovation Strategy: Leading the future by creating it'[16], the UK Government states that *"innovation is crucial to the UK building back better. It is at the heart of 'Build Back Better: our plan for growth' and so much else we want to achieve, from fighting coronavirus (COVID-19) to achieving net zero and building Global Britain. Boosting innovation in the private sector is an essential part of the UK's future prosperity and key to achieving UK objectives to be a force for good on global challenges around climate, biodiversity, prosperity, and security. We are calling on businesses to invest in innovation, getting British firms to the front of the pack."*

The UK Government identifies four Strategic Pillars and several key actions that are required if the UK is to be a global hub of innovation by 2025. MICM is designed to provide a place-based response to these innovation objectives and Table 2.1 shows how the project will address the four Strategic Pillars.

[15] https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth

[16] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009577/uk-innovation-strategy.pdf

Table 2.1: MICM's fit with UK Government's Industrial Strategy

Strategic Pillar	Manufacturing Innovation Centre for Moray (MICM) fit
People – We will make the UK the most exciting place for innovation talent.	MICM will drive awareness of the imperative to innovate and will be at the forefront of providing practical support to change mindsets and encourage businesses to invest in innovation structures, processes and talent.
Institutions & Places – We will ensure our research, development and innovation institutions serve the needs of businesses and places across the UK	MICM will support a much-needed cultural shift through innovation and modernisation across technologies and sectors. MICM will also provide a focal point for the North of Scotland when it comes to upgrading manufacturing infrastructure and the building of the space cluster.
Unleashing Business – We will fuel businesses who want to innovate	MICM will support manufacturing businesses to start and grow in key priority sectors and will provide the technology management skills to support sustainable development. Moray has world leading brand names, with its supportive SME environment. To maintain its world leading market position the centre will build on these areas of competitive advantage.
Missions and Technologies – We will stimulate innovation to tackle major challenges faced by the UK and the world and drive capability in key technologies	MICM will increase skills, share knowledge and best practice, and support local businesses to stimulate innovation and adopt new ways of working.

Fit with Scotland's Economic Strategy

In February 2016, the Scottish Government produced 'A Manufacturing Future for Scotland'[17]. Innovation and productivity were central themes in the action plan which noted that *"boosting productivity will be key to driving long term growth in the manufacturing sector. To improve performance, industry must be ready to embrace and implement technological innovations, new methods and processes and resource efficient business models into the manufacturing base. This investment will also help to secure a balanced and resilient economy."* Many of the proposed actions were intended to address collaboration around, and investment in, innovation. Certain key themes were identifiable, with actions around innovation including:

- the relationship between digital innovation and manufacturing process;
- the move towards a circular economy, minimising waste in manufacturing process and product lifecycle design;
- the importance of collaboration spanning business, academia, and the public sector to deliver the action plan.

Further progress was made with the publication of the Scottish Government's manufacturing recovery plan 'Making Scotland's Future - a Recovery Plan for Manufacturing'[18] in June 2021. This included several actions of relevance, including a commitment to *"develop a manufacturing 'network of networks' to pool and coordinate the resources of the variety of public and private networks already in operation."* Further actions included accessing of City and Growth Deal investment

[17] https://www.gov.scot/publications/a-manufacturing-future-for-scotland-action-plan/

[18] https://www.gov.scot/publications/making-scotlands-future-recovery-plan-manufacturing-final-june-2021/

and ensuring alignment of funds, e.g. the Digital Development Loan, to pilot and implement capital modernisation such as automation and robotics.

The Recovery Plan also refers to the National Manufacturing Institute Scotland (NMIS), established in 2016, a Renfrewshire based collaboration of industry, academia, and the public sector. The NMIS has a remit which includes:

- increase productivity by reducing barriers to innovation;
- growing the economy by galvanising investment and increasing manufacturing competitiveness;
- strengthen supply chain links;
- build collaborations and enhancing capability to influence adaptation and exploit manufacturing opportunities to boost Scotland's transition to a net-zero emissions economy by 2045;
- attract talent and equip current and future workforces with the skills the manufacturing and engineering community need.

The Scottish Government published its 10-year 'National Strategy for Economic Transformation' (NSET)[19] in March 2022. The overriding vision for the strategy is to deliver a 'wellbeing economy' for Scotland, which the Scottish Government defines as "an economy where good, secure and well-paid jobs and growing businesses have delivered a significantly reduction in poverty." This vision is to be achieved through five programmes and related actions (Table 2.2).

Table 2.2 Scotland's National Strategy for Economic Transformation

Entrepreneurial people & culture	Establish Scotland as a world-class entrepreneurial nation founded on a culture that encourages, promotes, and celebrates entrepreneurial activity in every sector of the economy
New market opportunities	Strengthen Scotland's position in new markets and industries, generating new, well-paid jobs from a just transition to net zero
Productive businesses & regions	Make Scotland's businesses, industries, regions, communities, and public services more productive and innovative
Skilled workforce	Ensure that people have the skills they need at every stage of life to have rewarding careers and meet the demands of an ever-changing economy and society, and that employers invest in the skilled employees they need to grow their businesses
Fairer more equal society	Reorient the economy towards wellbeing and fair work, to deliver higher rates of employment and wage growth, to significantly reduce structural poverty, particularly child poverty, and improve health, cultural and social outcomes for disadvantaged families and communities

'Scotland's National Innovation Strategy' was published in June 2023[20]. It updates the 2016 manufacturing action plan and builds on NSET. The five-year strategy has five goals:

[19] https://www.gov.scot/publications/scotlands-national-strategy-economic-transformation/

[20] https://www.gov.scot/publications/scotlands-national-innovation-strategy/

- to establish Scotland as a world-class entrepreneurial nation founded on a culture that encourages, promotes, and celebrates entrepreneurial activity in every sector;
- strengthen Scotland's position in new markets and industries, generating new, well-paid jobs from a just transition to net zero;
- make Scotland's businesses, industries, regions, communities, and public services more productive and innovative;
- ensure that people have the skills they need at every stage of life to have rewarding careers and meet the demands of an ever-changing economy and society;
- reorient the economy towards wellbeing and fair work, deliver higher rates of employment and wage growth, reduce structural poverty and improve health, cultural and social outcomes for disadvantaged families/communities.

Key areas for action include the building of clusters, focused on those in which Scotland is considered to have major advantages, including energy transition, health and life sciences, data, and digital technologies and 'advanced manufacturing' employing collaborative infrastructures such as NMIS, the Medicines Manufacturing Innovation Centre and the National Robotarium. The university sector is identified as having a major role in terms of commercialisation, including a new Investment Fund.

MICM offers a direct fit with several of the key strands in the National Strategy for Economic Transformation and the National Innovation Strategy. The MICM proposal makes a clear, and significant contribution to the 'productive businesses and region' strand with its focus on innovation and connecting businesses to manufacturing innovation infrastructure, regionally and Scotland-wide.

The establishment of MICM will also enhance the capacity of local businesses to compete in new and emerging markets, generating good quality employment prospects and career development opportunities for the existing workforce as well as new entrants. A more skilled workforce will be one of the outcomes through connections with UHI Moray (including MAATIC) and others.

Fit with HIE's Economic Strategy

HIE is the economic and community development agency for the north and west of Scotland. Its mission is to build a prosperous, inclusive, and sustainable economy across the Highlands and Islands, attracting more people to live, work, invest and visit.

HIE's 2023-28 Strategy[21] is under development and will have four pillars: People, Prosperity, Planet and Place. The Strategy highlights the main drivers of innovation change across the region:

- Data innovation and artificial intelligence;
- Automation and robotics;

[21] https://www.hie.co.uk/media/5006/strategyplusplanplus2019-2022-1.pdf

- Digital transformation;
- Cyber resilience;
- Circular economy.

The strategy is strongly aligned with the cluster groups identified in the Scottish Government's innovation strategy with a particular focus on the energy sector, particularly in renewables, decarbonisation and the net zero agenda. The region offers advantages in terms of both existing infrastructure and skills and Moray, with its proximity and transport links, is well placed to benefit.

The strategy also contains a strong commitment to net zero and fair and inclusive growth but the section on regional transformational opportunities has the most direct relevance to manufacturing innovation, highlighting the progression of HIE's cluster approach and intended actions across nine identified industrial sectors.

Supply chain development is a clear focus too. In terms of green hydrogen, for example, HIE makes a commitment to "*stimulate innovation and supply chain development in partnership with SE and SOSE through establishment of an innovation network and an industry cluster, and work with organisations such as NMIS to focus on key manufacturing opportunities*."

As noted above, food and drink is also a highly significant feature of the Moray economy. There is a clear recognition in HIE's strategy for the need to invest in innovation with a commitment to "*increase innovation and sustainable growth in primary production through the local application of the national food and drink strategy, through targeted interventions and programmes, and by enabling collaborations across the sectors and with academia*" but also related activities around the transition to net zero in agriculture and whisky and investment in "*digital technologies, automation and skills*".

The North Highlands and Moray are at the centre of the space revolution, as home to Sutherland Spaceport and Orbex. HIE and partners have established the North Coast Space Cluster (NCSC)[22] to capitalise on these and other regional opportunities and generate new jobs and careers based on the skills and resources that the region is well placed to deliver. Sutherland Spaceport was the first spaceport in the UK to gain planning consent and is currently under construction. It will have capacity for up to 12 orbital launches per year. In 2019, Orbex opened their development and manufacturing facility on the Enterprise Park in Forres, designing and building the Orbex Prime launch vehicle that will launch from Sutherland Spaceport. Orbex will be at the centre of a new cluster of local businesses providing services and products to the growing space sector and using data for commercial purposes and academic research. MICM will provide a strong resource with which to help build this cluster.

Fit with Planning Policy

As with other Moray Growth Deal projects, MICM provides an opportunity to show how Growth Deal projects can be integrated with, and contribute to, local planning

[22] https://www.hie.co.uk/latest-news/2022/february/17/space-sector-set-to-create-new-jobs-in-highland-and-moray

policy as it seeks to meet new imperatives and add additionality in the outcomes that are secured from investment in the local economy. Key issues here are alignment with the current National Planning Framework (NP4)[23] and Scottish Planning Policy (SPP), particularly in the light of the Planning (S) Act 2019.

Building on the Planning Act (S) Act 2019 NPF4 indicates that planning should be underpinned by the six underlying principles[24] of just transition, conserving and recycling assets, local living, compact urban growth, rebalanced development, and rural revitalisation.

Scottish national spatial planning policy applies these six principles in supporting the planning and delivery of sustainable places (seeking to reduce emissions, restore and better connect biodiversity); liveable places (enabling people to live better, healthier lives); and productive places (underpinned by a greener, fairer, and more inclusive wellbeing economy).

In relation to the planning and delivery of productive places the NP4 guidance supports MICM particularly as it relates to conserving and recycling assets through the repurposing of Unit 9 as the MICM Hub, as well as rebalanced development and rural revitalisation. MICM's net zero demonstrator role also fits well with NPF4 objectives.

All the MGD projects are embedded in the indicative Regional Spatial Strategy[25] (iRSS) as submitted to the Scottish Government in September 2020. Moray Council's Head of Economic Growth and Development is on the MICM Project Board and is actively engaged with HIE staff on proposals at the well-established Enterprise Park Forres where MICM will be located.

Appropriate attention is also being given to supporting the Town Centre First principle with an example of this being the coordination between the MICM, MAATIC and the Enterprise Hub projects to ensure appropriate alignment: MICM is deliberately based at Enterprise Park Forres to be at the heart of the emerging space cluster, whereas MAATIC and the Business Enterprise Hub are focused on Elgin to ensure that student activity in the city is maximised.

Fit with the economic needs of the local area.

The 10 year "Moray Economic Strategy, Towards Future Prosperity and Economic Growth'[26] was produced by the Moray Economic Partnership in 2022. The Strategy highlights some key facts on the Moray economy. In 2022 19% of jobs in the Moray economy were in the manufacturing sector compared to 8% for Scotland. The area has the greatest number of manufacturing jobs per head in Scotland and some 10% of all the jobs in the area are in the food and drinks sector. The average annual

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[23] https://www.gov.scot/publications/national-planning-framework-4/

[24] **Just Transition** (empower people to shape their places and ensure the transition to net zero is fair and inclusive.); **Conserving and recycling assets.** (making productive use of existing buildings, places, infrastructure and services, locking in carbon, minimising waste, and building a circular economy): **Local living (**supporting local liveability and improve community health and wellbeing by ensuring people can easily access services, greenspace, learning, work and leisure locally); **Compact urban growth** (limiting urban expansion so we can optimise the use of land to provide services and resources, including carbon storage, flood risk management, blue and green infrastructure and biodiversity; **Rebalanced development** (targeting development to create opportunities for communities and investment in areas of past decline, and manage development sustainably in areas of high demand) and **Rural revitalisation (**encouraging sustainable development in rural areas, recognising the need to grow and support urban and rural communities together)

[25] https://www.legislation.gov.uk/asp/2019/13/section/5/enacted

[26] http://www.moray.gov.uk/downloads/file147200.pdf

gross full time mean wage is £31,987 compared to £34,936 for Scotland - a difference of 8%. The gap widens to 13% when all (full time and part time) jobs are included. The average annual wage in Moray is £24,879 compared to £28,660 for Scotland[27].

The Strategy highlights many challenges for Moray businesses including the increased costs of doing business. There is also focus on the Net Zero agenda. The Strategy recognises net zero innovation in some of the larger food and drink companies but recognises that for most businesses there is a long way to go.

Moray's previous Economic Strategy (2019 to 2029) noted that many businesses in Moray lack the resources, and particularly the knowledge, to execute R&D capital projects and secure the productivity benefits. In 2018 Moray ranked 2nd lowest of all local authority areas in Scotland in relation to spending on business enterprise research and development (BERD) as a proportion of GDP (0.12% of GDP versus a Scotland average of 0.83%)[28]. The 2019 Strategy argued that from a business perspective, key drivers for growth in the area will be a combination of new start-ups in growth technologies and a greater density of SMEs with the capability to grow further, but that "*the future economic success of Moray will heavily depend upon more traditional industries investing, innovating, and adapting, because they are the area's major employers. In these industries, which are mostly linked to manufacturing, the ability to adapt operations and the workforce to sustain competitiveness and improve productivity will be critical to the future economy.*

The current Moray Economic Strategy refers to the eight Moray Growth Deal Projects and outlines what it expects of the Growth Deal investment – that there will be new high-quality jobs in existing sectors and diversification of Moray's economy into new high value areas. It is anticipated that collectively the eight projects will create around 3,500 direct and indirect jobs in Moray.

The Strategy concludes with seven priorities for action in support of the Growth Deal projects. These include the alignment of skills systems with emerging needs, particularly around green jobs. They also include action to increase awareness amongst the wider business community of Moray and use the Growth Deal Investments to drive readiness within the existing supply chain, which is where MICM is expected to play an important role.

The delivery of MICM will help to create higher paid job opportunities in the types of technology-driven roles that young people are looking for which will help encourage more of them to stay in the area. The switch from manual, relatively low skilled process jobs to more technical control roles, able to be undertaken by skilled people of both genders, will also increase opportunities for women locally and helping to close the gender pay gap. Support for the present proposal fits well with the ambitions expressed in the Moray Economic Strategy, particularly in enhancing the productivity of the manufacturing sector and growing wages. As the Strategy makes clear "*innovation through automation and new work processes (including artificial intelligence) will also be required. These will, in some sectors, help to offset limited*

[27] Moray's Economic Strategy (2022). http://www.moray.gov.uk/downloads/file147200.pdf

[28] Scottish Government National Statistics: Business Enterprise Research and Development Scotland, 2018

availability of workers. This will include traditionally important sectors such as food and drink manufacturing (and its supply chain) and timber processing."

Business Strategy and Aims

A core objective will be to place Moray business at the forefront in the adoption of new technologies in order to innovate and be productive. At the present time, much remains to be done to realise this goal.

The Moray Economic Strategy seeks to sustain a growth economy that can drive higher wages and influence young people to stay and have a life and career in the area. Failure to build on Moray's local strength in manufacturing and attract new talent will escalate the departure of skilled young people and the potential demise of a manufacturing sector that will struggle to survive against external competition.

With some of the lowest business R&D figures in Scotland it is essential that the area's manufacturing base drives up its research and development to support its long term sustainable growth. What is required is a grass roots cultural shift in how Moray businesses gain insight into the latest process and production efficiencies that are available, and how they can use them to undertake product and process innovation.

MICM's aim is therefore appropriately ambitious as follows: ***Working with other elements of the Growth Deal, to develop an innovation ecosystem which will help manufacturing businesses in Moray to become world-class.***

Investment objectives

The MICM project has four primary objectives:

- To increase BERD (Business Enterprise, Research and Development) in Moray's indigenous manufacturing companies.
- To increase growth, productivity, and efficiency in Moray's indigenous manufacturing companies.
- To increase the number of manufacturing start-ups in Moray.
- To support the attraction of manufacturing inward investment to Moray.

In its pursuit of these primary objectives, MICM can also be expected to contribute, indirectly, to the creation of higher paid jobs, an improvement of the skills offer, retention and attraction of young people, and reducing occupational segregation and the gender imbalance.

Existing arrangements

Scotland's National Innovation Strategy (2023)[29] highlights the considerable amount of innovation support that is provided to businesses across Scotland at the present

[29] https://www.gov.scot/publications/scotlands-national-innovation-strategy/

time. As Figure 2.1 illustrates just how crowded and complex the current innovation ecosystem is, with support from Scottish Government for innovation provided through a variety of institutions and policy interventions.

Figure 2.1 Scotland's Existing Innovation Ecosystem Landscape

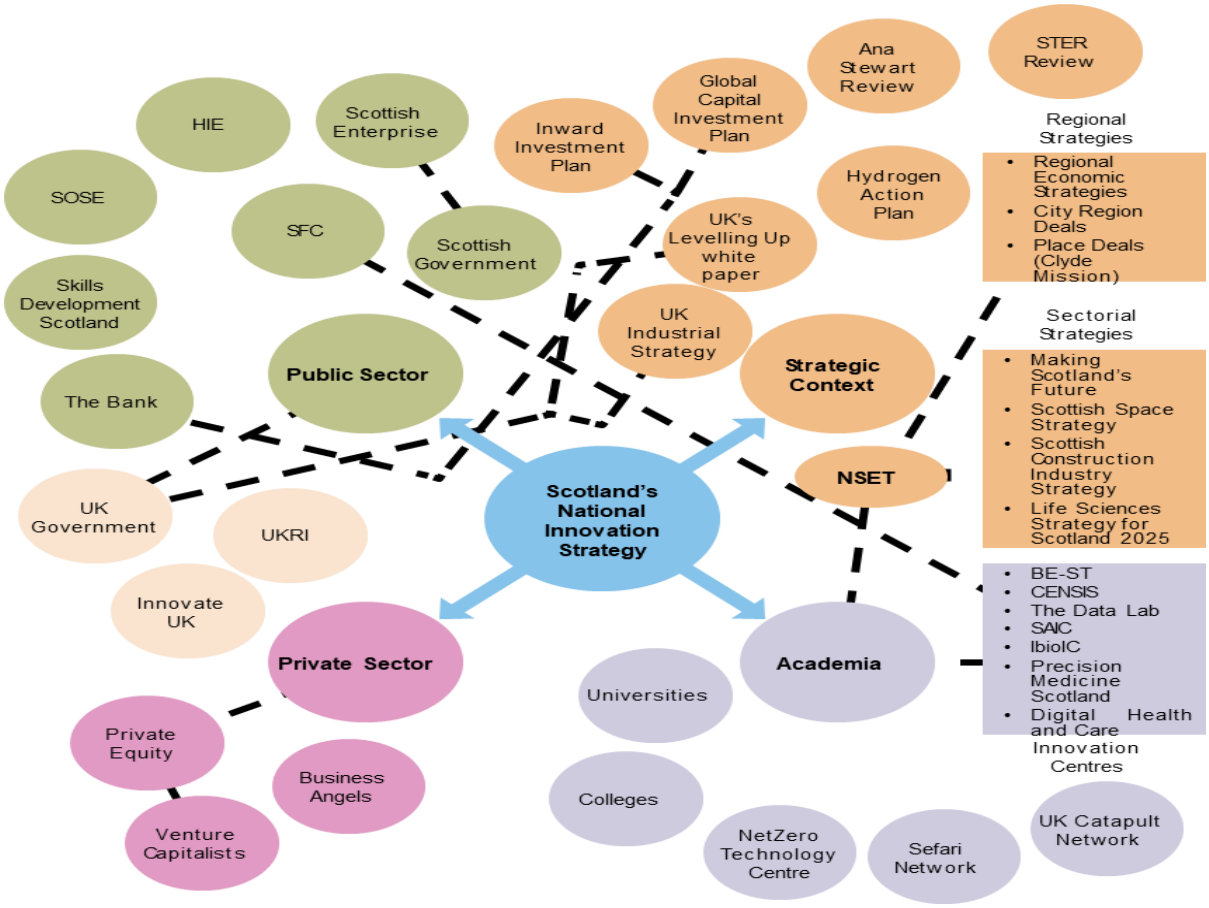


Table 2.3 sets out the existing innovation delivery landscape, drawing on the supply-side assessment undertaken as part of the FBC process. Key elements of manufacturing innovation support are highlighted in column "c," while column "d" suggests the potential importance of a link to MICM as well as the nature of that potential involvement. Beyond those providers identified in Table 2.3, business consultees also highlighted the value of networks such as the Moray Chamber of Commerce and Federation of Small Businesses as well as the value of trade associations and trade shows as sources of occasional learning.

Table 2.3: MICM and the existing innovation delivery landscape

a. Provider	b. Who are they	c. What do they offer businesses in manufacturing innovation	d. Link to MICM?
Scotland-wide			
Scottish Manufacturing Advisory Service (SMAS)	Part of Scottish Enterprise	Scotland wide and all sectors. Team of 20+ practitioners guide businesses immediate tactical challenges as well as longer term strategic change. Seek to offer improvements in productivity, culture, and behaviours from the shopfloor to boardroom. Offers tailored support programme. Explore cost saving technology, supply chain processes and digital technologies.	High priority. Potential virtual and on-site presence.

a. Provider	b. Who are they	c. What do they offer businesses in manufacturing innovation	d. Link to MICM?
UK Knowledge Transfer Partnerships (KTP), Innovate UK, Knowledge Transfer Network (KTN) and UK Research & Innovation (UKRI)	UKTP and KTN are national Programmes, co-financed by Scottish Government Innovate UK and UKRI are non-departmental public bodies of the UK Government	Knowledge Transfer Partnerships is a UK-wide programme that helps businesses for to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base[30]. Innovate UK[31] provides funding to businesses to help with projects to stimulate innovation. The Knowledge Transfer Network[32] has been established by Innovate UK to help people and businesses with innovation by helping them to connect with other businesses. UKRI[33]provides funding to help businesses innovate.	High priority. Potential virtual and on-site presence
National Manufacturing Institute Scotland (NMIS)	University of Strathclyde, SE, HIE, High-Value Manufacturing Catapult, others	Industry-led manufacturing research and development facility focused on skills, productivity, and innovation in Scottish advanced manufacturing. Support across all services and sectors. Filling the space between academic research and industry, access to R&D facilities engineers, machining facilities, researchers, and business advisers. The NMIS subsidiary the Advanced Manufacturing Research Centre (AFRC) is part of the UK wide High Value Manufacturing Catapult.	High priority. Potential virtual and on-site presence or visiting presence
Interface	Funded by the Scottish Funding Council, Interface connects business to Scotland's universities, research institutes and colleges	Interface - the knowledge connection for business - works with businesses of all sizes/sectors, to match them to Scotland's academic expertise to tackle industry sector challenges and individual business challenges to help them grow. Connections into all Scottish universities, research institutes and colleges. Will facilitate connections between academia and business and help identify funding for joint projects.	Medium priority. Virtual and occasional on-site presence.
Skills Development Scotland (SDS)	Scotland's national skills agency. Executive body of Scot Gov (under review)	Support to partners and employers to develop Modern Apprenticeships Framework. Various online tools to assist businesses recognise and develop skills needs and strategies. All sectors.	High priority. Potential virtual and occasional presence.
Specific Scottish Innovation Centres (e.g. CENSIS, BE-ST and Data Lab)	Scottish Funding Council committed £120 million for the Innovation Centre programme over five years (2013-18) to support the university infrastructure. Each Innovation Centre is expected to lever further investment from industry and other sources of public funding.	The Centres aim to enhance innovation and entrepreneurship across Scotland's key economic sectors, create jobs and grow the economy. Innovation Centres (ICs) have backing from industry and draw on all of Scotland's research expertise in the relevant sector to work on problems and opportunities identified by industry. They add value through secondments, industrial studentships, spaces for collaborative work and shared access to equipment. Not all will be relevant to MICM – those that are likely to be most closely involved are: • CENSIS - sensing, imaging and Internet of Things (IoT) technologies • BE-ST - built environment transition to zero carbon emissions • Data Lab – data science and AI	High priority. Potential virtual and occasional presence

[30] http://ktp.innovateuk.org

[31] https://www.gov.uk/apply-funding-innovation

[32] https://www.gov.uk/government/news/connecting-innovators-the-knowledge-transfer-network

[33] https://www.ukri.org

a. Provider	b. Who are they	c. What do they offer businesses in manufacturing innovation	d. Link to MICM?
Regional Focus			
Highlands and Islands Enterprise	Agency for regional economic and community development	Provide targeted support to businesses with growth potential by strategical development, with partners, of the business and innovation infrastructure. Offer specialist digital technology support and advice. Assistance with skills through graduate placement support. Strategic partnerships e.g., with MIT and Glasgow School of Art, offer a model and means of drawing in larger scale, established businesses.	High priority. On site presence.
University of the Highlands and Islands	Providers of Higher Education and Research	Offers apprenticeships, graduate-business links, CPD and customised research for businesses and graduate recruitment. Innovation supported through the Knowledge Exchange Team offering consultancy services, specialist university facilities, equipment, and testing services to companies, placements, and research commercialisation advice. MICM would also seek to build a close working relationship with AMC at UHI West Highland	High priority. Regular virtual or visiting presence.
UHI Moray	Providers of Further and Higher Education	Offers apprenticeships, employability programmes, CPD, professional development awards and delivery of innovation voucher projects. Focus on oil and gas, digital healthcare, and life sciences. Delivery of MGD MAATIC and BE Hub projects.	High priority. Regular virtual or visiting presence.

Conclusions on current supply of innovation services

There are a significant number of innovation support services currently available to businesses in the Highlands and Islands, but the evidence clearly shows that despite the support on offer, there are knowledge and engagement gaps which need to be overcome to improve take-up. The missing ingredient is intensive, tailored, local engagement of the right sort to encourage businesses to make the leap and to maximise engagement from businesses who are busy, risk averse and do not always see the benefit to their bottom line.

Business needs – current and future

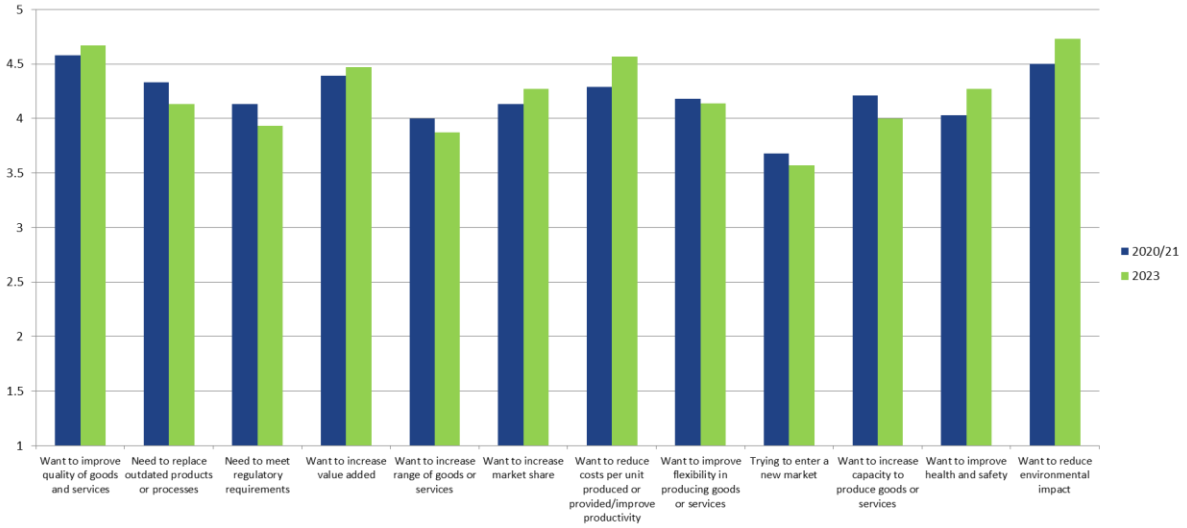
Innovation needs of manufacturing businesses in Moray.

To be successful, MICM must meet a clear need from Moray business. This need was assessed as part of work undertaken at both the OBC and FBC stages through a series of workshops and structured interviews with businesses in Moray. All the key business support stakeholders were also involved, including the Business Gateway, Chamber of Commerce, Moray Growth Deal Business Assembly, HIE, UHI Moray, Skills Development Scotland and Moray Council.

Online surveys were also conducted with Moray business in both 2020 and 2023. In the 2020 survey some thirty Moray businesses responded to the on-line survey and in addition there was a wide range of one-to-one consultations with businesses and other intermediaries. Workshops were also undertaken facilitated by Moray Chamber of Commerce and Moray Growth Deal Business Assembly. In the 2023 survey a more extended and detailed online questionnaire was sent to Moray businesses. Some 17 companies responded to this in-depth survey.

The interviews and responses to the two waves of the on-line survey revealed that Moray business considered that the most important drivers to them in undertaking innovation were to address environmental impact issues; reduce costs and improve the quality of their products (Figure 2.2).

Figure 2.2. Key drivers for undertaking innovation by Moray businesses (scored 1-5, where 1 = least important and 5 of greatest importance)

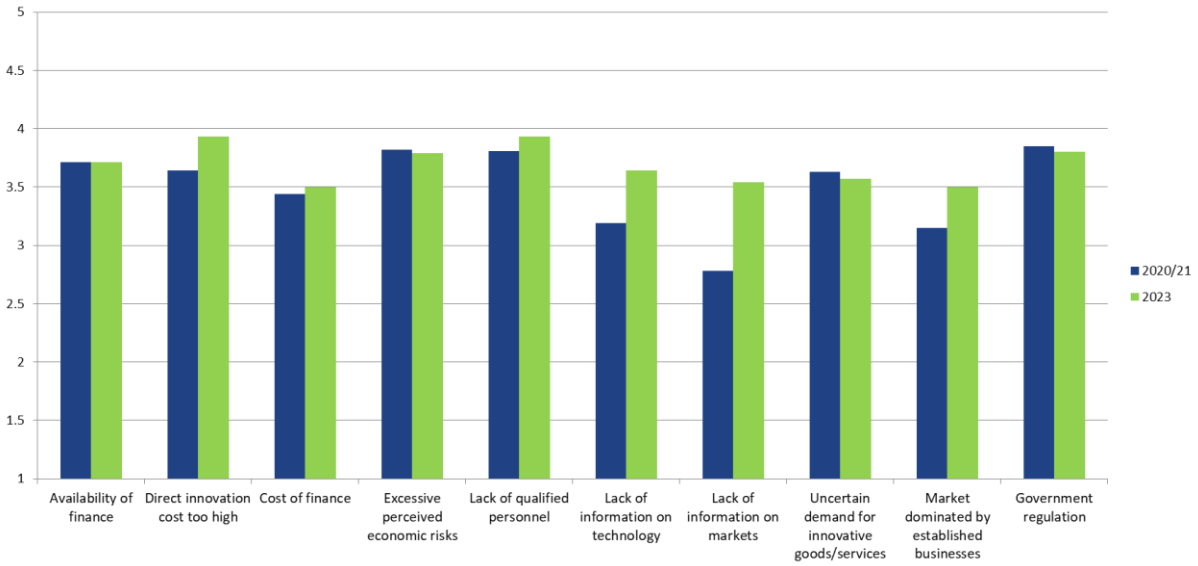


However, Moray manufacturing businesses consider that several factors are currently constraining their ability to innovate. As Figure 2.3 on the following page shows, besides concerns around Government regulation, they believe that the economic risks associated with undertaking the required investment are too great. They also found difficulty in obtaining skilled personnel.

There was a considerable degree of consistency in what were felt to be common barriers to innovation across the SMEs interviewed as part of the demand assessment work and this understanding was shared by the intermediaries consulted. Interviews confirmed:

- the absence of internal resource to pursue research and development;
- the inability to attract people with the skills and experience required to enable innovation;
- the distances to centres of learning and innovation for businesses in Moray with much provision being in Scotland's central belt e.g., staff in the drinks industry might naturally be drawn to provision at Heriot-Watt University, but travel requires considerable 'downtime' for staff;
- lack of business or sectoral 'scale' with insufficient levels of competition to foster innovation and learning.

Figure 2.3. Key Factors Constraining Investment in New Products and Processes in Moray Business (scored 1-5, where 1 = lowest constraint and 5 biggest constraint)



Gaps in innovation take-up and support that need to be targeted

The business surveys undertaken as part of the demand assessment identified clear perceptions of the key gaps in both what they themselves were doing to be proactive enough in undertaking innovation ('business innovation activity') and the extent to which the existing delivery landscape outlined above was meeting business needs (the 'supply of innovation support').

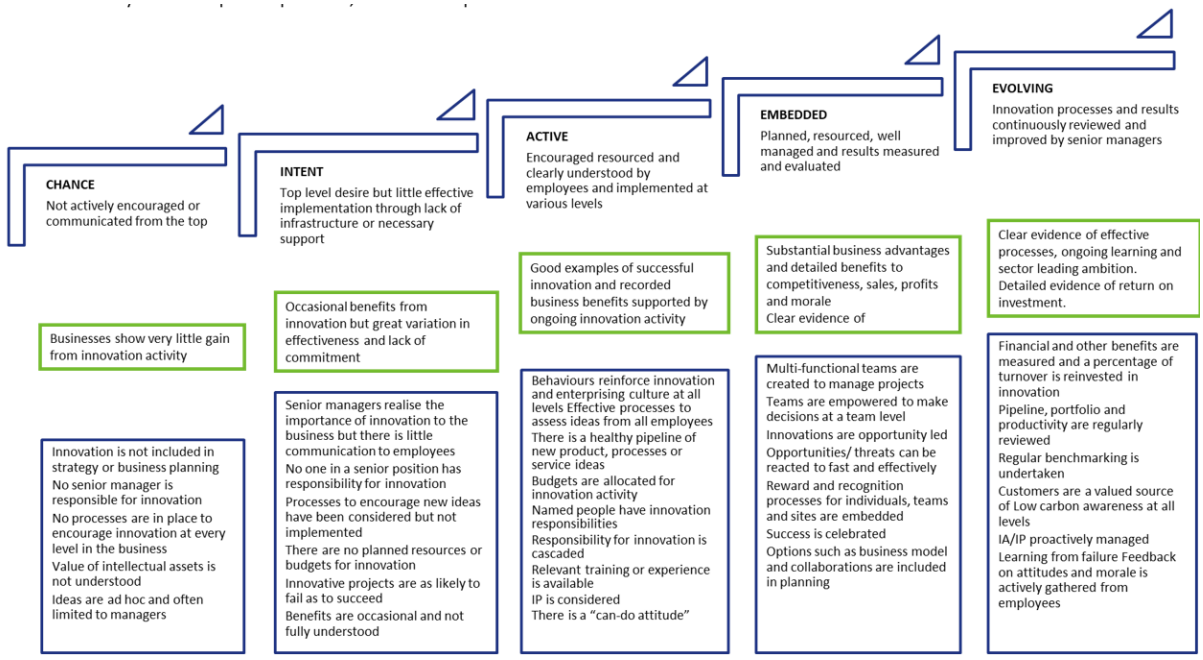
The consultations also established how businesses and business support intermediaries considered a manufacturing innovation centre might meet unfilled needs and highlighted the services it might provide.

Moray Business and their position on the Innovation Ladder

The extent to which companies are "innovation active" varies considerably by the size of business. Moray is fortunate in having some very large, well established multinational businesses who have developed their own extensive and relatively well-resourced approaches to their innovation needs. Alongside these businesses are a relatively small number of medium sized companies and for these there is considerable variation in their approach to innovation. In general, most would wish to be undertaking more innovation and would value more guidance on how and where they should be investing. There are then a fairly large number of smaller manufacturing businesses who are under-investing in innovation and consider that they could benefit from several different services that would help them do more.

To obtain a better understanding of the current state of Moray business innovation it is first helpful to gauge where Moray businesses are on the Innovation Ladder that has been developed by HIE (Figure 2.4).

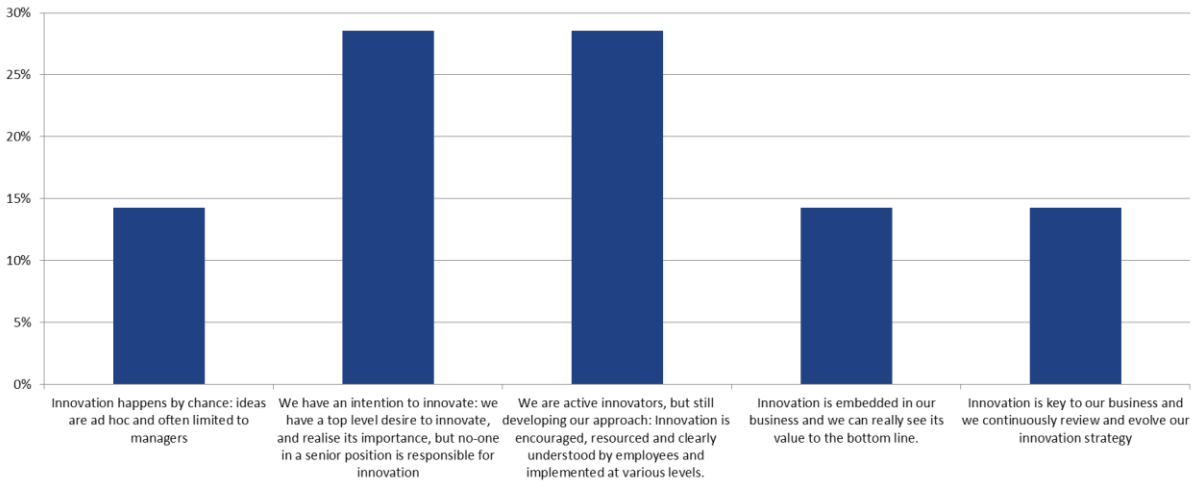
Figure 2.4. The Innovation Ladder



Source: Highlands and Islands Enterprise, 2023

The Moray companies that participated in the survey undertaken in May and June 2023 were asked to position themselves on the ladder. Figure 2.5 shows the results. The evidence pointed to the businesses being nearer the bottom of the ladder than the top. Most of the businesses responded stated that either (1) they had an intention to innovate and have a top level desire to innovate, recognising its importance, but that there was no-one in a senior position responsible for the innovation process or (2) that they are active innovators, but still developing their approach.

Figure 2.5. Moray Business and their position on the Innovation Ladder



The survey of Moray businesses probed how much they had adopted digital technology across all major areas of business operation. They indicated whether they had successfully introduced digital technology, were introducing digital technology, considering adopting business technology, or not using digital technology at all. Figure 2.6 shows the results from the sample. These findings are

consistent with a recent national survey conducted by MADE UK (Figure 2.7). The responses point to relatively low levels of digital technology, but at the Moray level they were, in general, no worse than UK counterparts, reinforcing innovation as a national imperative.

Figure 2.6 Moray Business adoption of digital technology

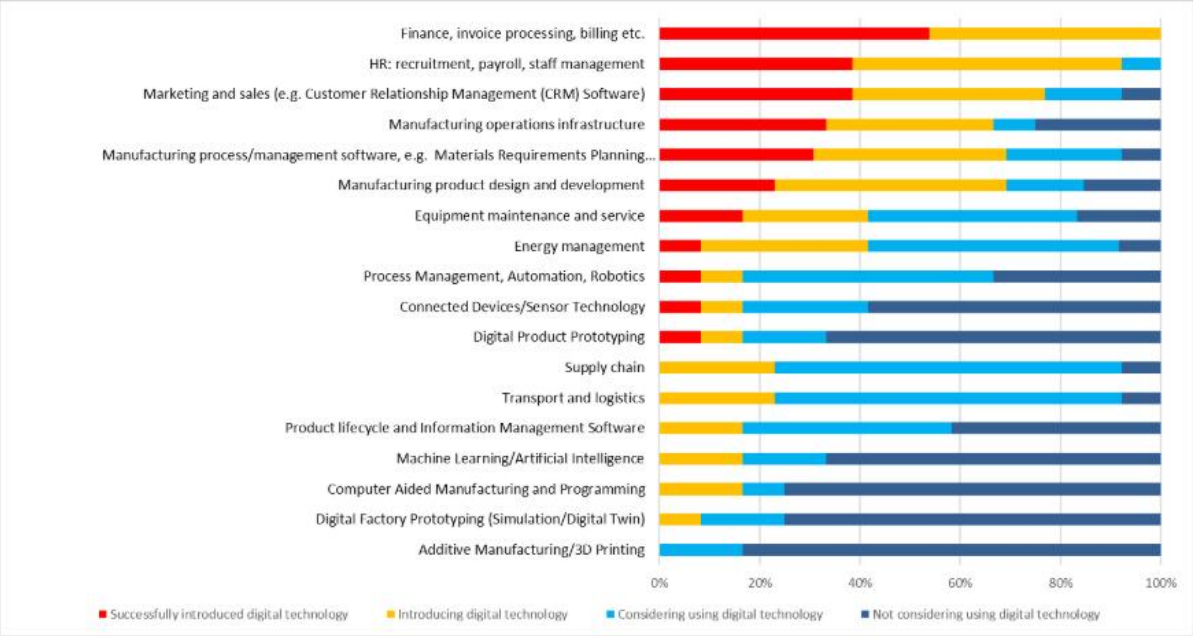


Figure 2.7. Spread of digital technology across different areas of business from the MADE UK/Infor Innovation Survey (2022)

Conclusions on the current position

The evidence from the survey of Moray businesses and consultation with the business community and business survey providers indicates that the key drivers for innovation are seen by Moray business to be the need to respond to the environmental impacts of their products and processes, to secure reductions in costs and, crucially, to be able to improve the quality of their product and to differentiate it relative to their competitors.

Whilst Moray businesses recognise the need to innovate, they find it difficult to do enough and are highly risk averse. The lack of key personnel and time available to senior management are both identified as major constraints, as is an acute lack of knowledge as to what they should be doing and relevant best practice.

As a result, Moray businesses are mainly on the lower rungs of the innovation ladder, a matter of concern that is entirely consistent with the low levels of business R&D expenditure evidenced by national statistics. Moray businesses generally have the INTENT to do more innovation, and while some are clearly innovation ACTIVE, there is still insufficient attention to EMBEDDING innovation activity in the culture of the business. Insufficient attention to innovation is reflected in inadequate levels of adoption of digital technology across the key areas of their business.

Perceptions by Moray business on awareness of existing innovation service provision

The demand assessment surveys of Moray business conducted as part of the OBC and FBC development also provide valuable evidence on business awareness of the innovation support available. This presented a rather mixed picture across sectors and size of businesses. Support from HIE is widely acknowledged, increasingly by those businesses who had experience of being "account managed" by HIE. As a very approximate estimate around 15-20% of the existing stock of Moray manufacturing companies might be considered to have received some degree of support.

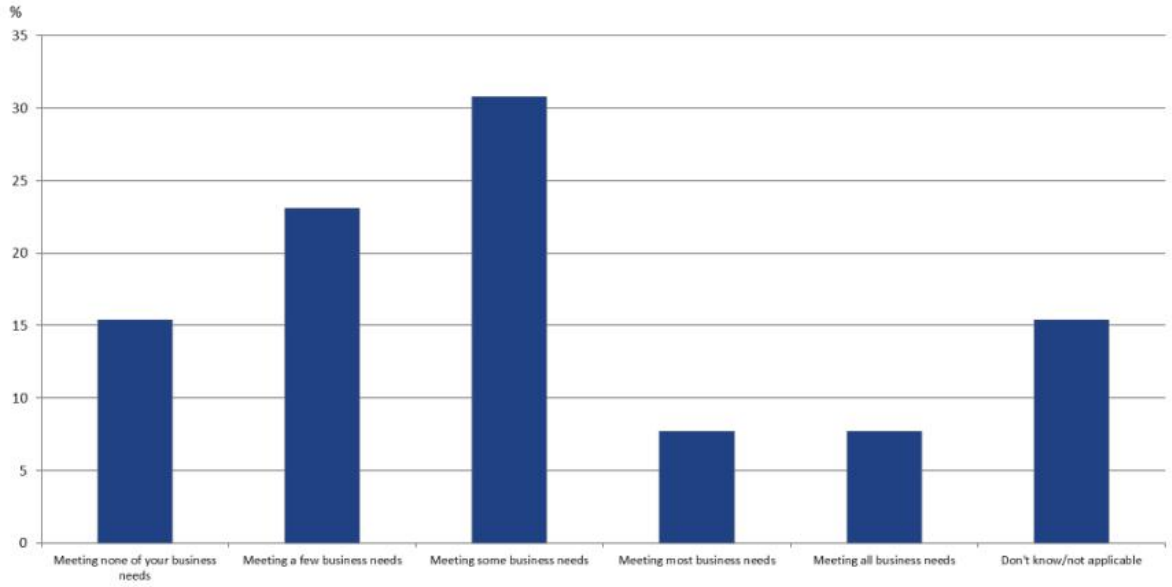
Figure 2.8 on the following page shows that around 14% of businesses perceived that existing innovation support was meeting all or most of their business needs. However, just over 30% considered that provision was meeting only some of their business needs and around 38% considered that existing support was meeting few or none of their business needs.

Qualitative feedback from the FBC survey a number of areas where respondents felt the existing supply of innovation support could be improved. These included:

- More clarity, signposting, and transparency on what specific support is available;
- More support on methods of funding business development;
- More technical and qualified support required;
- Although there is good support on highlighting what business should do, it was felt there was less practical support on how to do it;
- Programmes often come along with relatively short windows in which to apply for support/funding, and the pressure of day-to-day work often means there is not enough time to apply. Practical support in helping to access short duration funds would help;
- The time involved in putting applications can be difficult to justify so some help is also needed with this aspect;
- More support to enable market diversification;

- Moray business also need a growth in support services for new technologies that will be used in 3 to 5 years.

Figure 2.8. Perception of Moray business on the extent to which existing innovation service provision is meeting their needs



The businesses were also asked what role they felt that an innovation centre could play in meeting their needs. Several possible aspects were probed and the findings from the 2020 and 2023 business surveys are summarised in Table 2.4. The roles that were given the most emphasis in both surveys were enabling business collaboration to occur, helping to translate new ideas into commercial application, building business networks and contributing to the manufacturing knowledge base. Providing businesses with the skills to scale up and promoting the manufacturing sector were also seen as relatively important.

Table 2.4 Importance of roles that an Innovation Centre could facilitate (scored 1-5, with 1 being least important and 5 being most important)

	2020	2023
Enabling collaboration to occur	4.0	4.3
Helping to translate new ideas into commercial application	4.0	4.2
Building business networks	4.0	4.2
Contribution to the manufacturing knowledge base	3.8	4.2
Providing businesses with the skills to scale-up	3.8	4.1
Encouraging the promotion of manufacturing	4.1	4.1
Helping researchers become aware of commercial opportunities from their research	3.6	4.0
Attracting management and commercial talent	4.0	4.0
Attracting corporates for R&D collaborations	3.3	3.9
Enabling entrepreneur driven businesses to form	3.7	3.9
Enabling businesses to have the business skills required to commercialise their research	3.9	3.9
Building research networks, particularly with the universities and other research institutes	3.3	3.9
Enabling you to connect with innovation support services (e.g. SMAS, NMIS, Interface)	3.7	3.9
Encouraging educational programmes & research that promote the development of skills in manufacturing	3.8	3.8
Providing facilities and services to assist manufacturing companies	3.9	3.8
Encouraging business mentoring	3.7	3.7
Enabling business spin-outs to occur	3.4	3.7
Attracting business investment from the rest of the United Kingdom	3.5	3.6
Building international networks	3.3	3.6
Attracting funds from Venture Capitalists/Business Angels	3.2	3.5

The companies were asked which services provided by an innovation centre they would make most use of. Figure 2.9 shows that service support to secure net zero targets and reducing costs were highly rated. Support to increase productivity and securing process improvements, as well as gaining access to 3D printing and digital services were also highly rated.

Figure 2.9. Services that businesses would be most likely to use at MICM

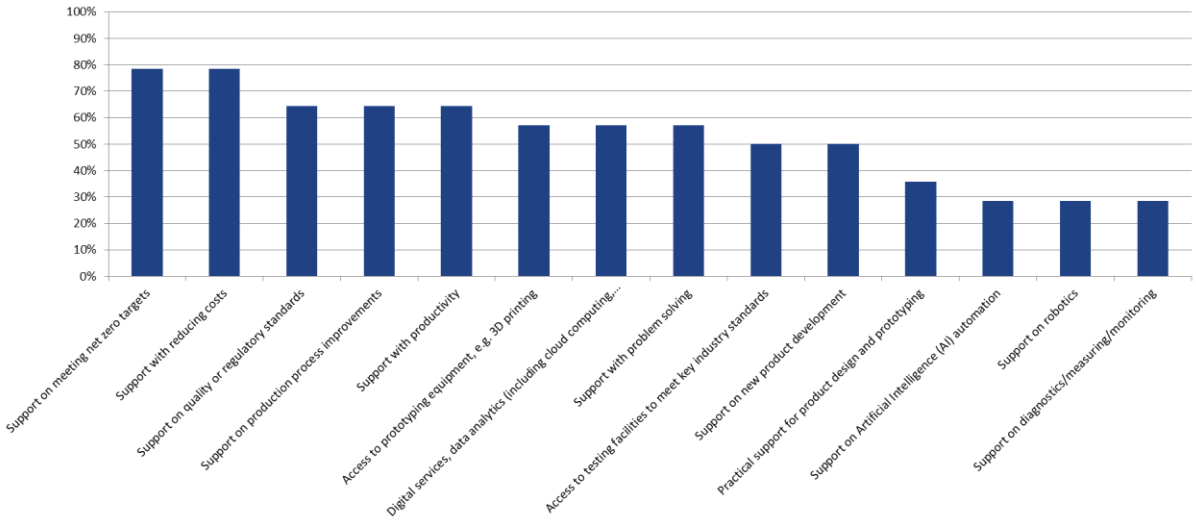


Figure 2.10 shows the innovation services that Moray businesses considered that they would seek to access from MICM. Businesses responding pointed to peer-to-peer networking and learning as being of greatest importance, including finding out how other Moray manufactures were innovating, as well as workshops on business development, enterprise and leadership.

Figure 2.10. Innovation activities that business would access at MICM

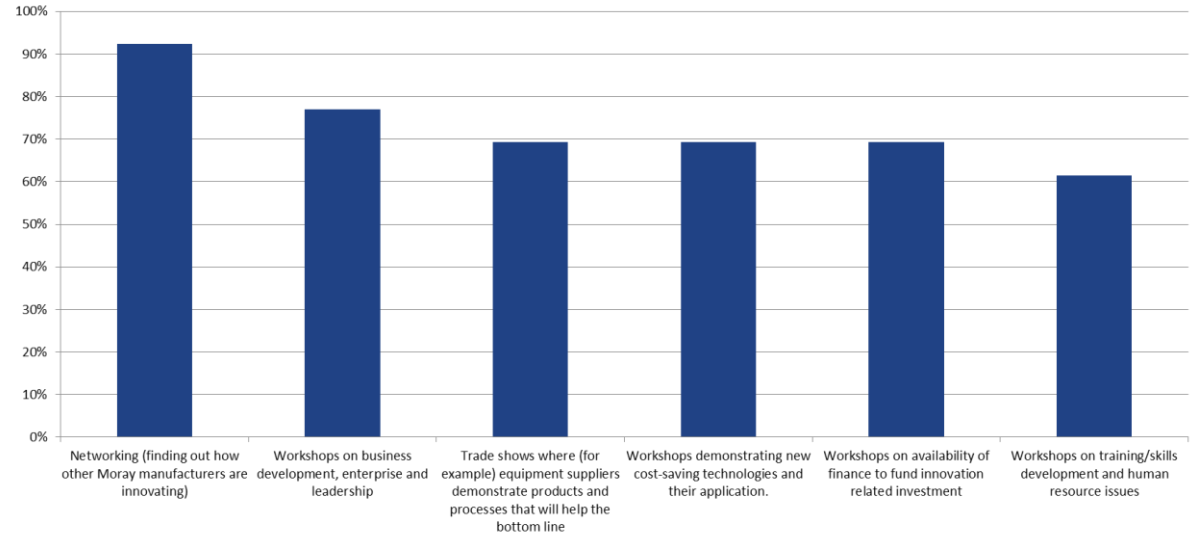
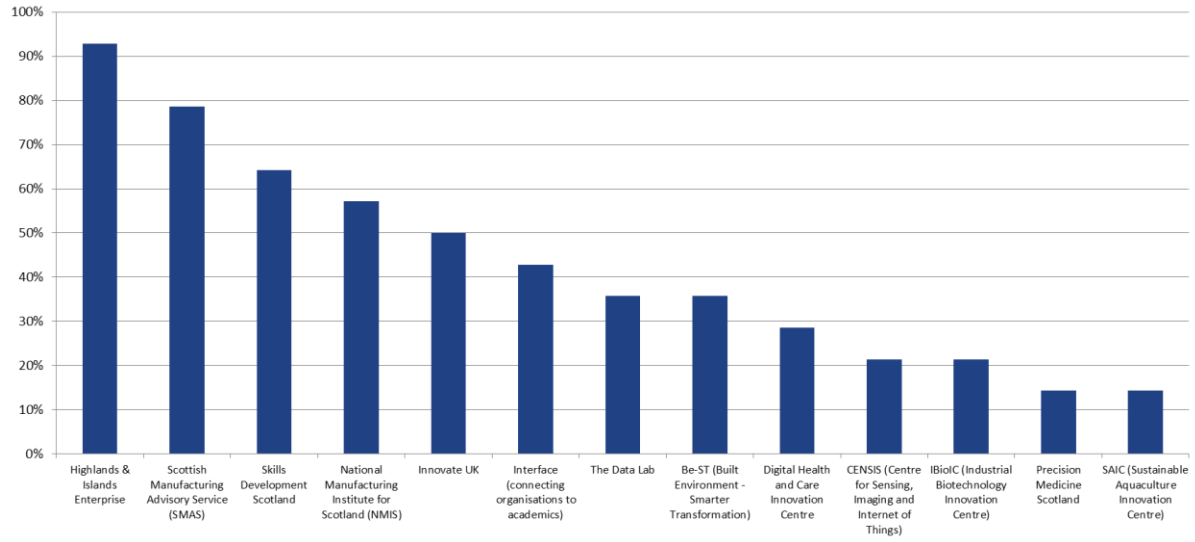


Figure 2.11 shows the innovation services that Moray business would seek to access at MICM by key innovation service provider. There was a strong focus on access Services provided by HIE, followed by SMAS, SDS, NMIS, Innovate UK and Interface.

Figure 2.11. Innovation services that business would access at MICM



Conclusions on innovation support and the role of MICM

For those companies that are failing to innovate enough it is important that they have access to advice. The ***Tell element*** in this advice is to make them aware and promote not only that 'something better' is out there through the diagnostic process, but to lead into the ***Show element*** that will effectively demonstrate how 'something better' can be applied in relevant, cost-effective ways to a specific business. The ***Do element*** will be a supportive use of technical support to enable good practice and processes to be project managed into businesses. This is a direct approach to tackling the key economic barrier of information deficiency. It is here where it is considered that a manufacturing innovation centre could build on the successful academy approach used by SMAS to build networks of individuals employed in businesses with the technical and practical skills to make the most of industry 4.0 in their own workplaces.

The conclusion of the OBC and FBC process is that this is the optimal way to help SMEs to successfully execute change. For hundreds of SMEs, plans, roadmaps, and good intentions will not lead to an actual investment because they lack technical capacity and middle management to execute plans. MICM can address these issues directly.

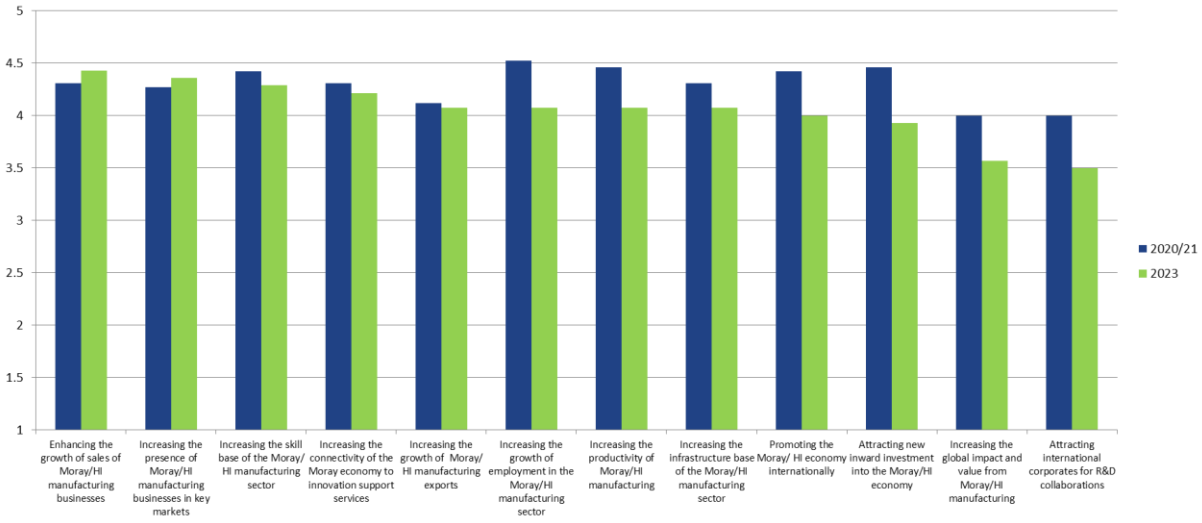
How a Manufacturing Innovation Centre for Moray could fill the gap

Moray businesses surveyed as part of the MICM Business Plan see substantial benefits to the local economy from a dedicated manufacturing innovation centre as shown in Table 2.5. All the benefit categories shown scored strongly, but employment growth, productivity growth, increasing the skill base and promoting the Moray economy internationally and attracting inward investment tended to be identified as very important benefits. Figure 2.12 shows the results from both surveys. In the more recent survey increasing the growth of Moray manufacturing business sales has assumed prominence, as might be expected in the immediate post-Covid period.

Table 2.5: How important do you consider the following possible benefits of the proposed manufacturing innovation centre on the Moray/Highlands and Islands economy? *(Average Scores, where 1 is not important and 5 is very important)*

Benefit category	Weighted score (n=26)
Increasing the growth of employment in the Moray/H&Is manufacturing sector	4.5
Increasing the productivity of Moray/H&Is manufacturing	4.5
Attracting new inward investment into the Moray/H&Is economy	4.5
Increasing the skill base of the Moray/ H&Is manufacturing sector	4.4
Promoting the Moray/ H&Is economy internationally	4.4
Enhancing the growth of sales of Moray/H&Is manufacturing businesses	4.3
Increasing the infrastructure base of the Moray/H&Is manufacturing sector	4.3
Increasing the connectivity of the Moray economy to innovation support services	4.3
Increasing the presence of Moray/H&Is manufacturing businesses in key markets	4.3
Increasing the growth of Moray/ H&Is manufacturing exports	4.1
Attracting international corporates for R&D collaborations	4.0
Increasing the global impact and value from Moray/H&Is manufacturing	4.0

Figure 2.12. Potential benefits from MICM



The business survey went on to ask companies how a manufacturing innovation centre could specifically benefit their business and which elements of potential support they regarded as more or less important.

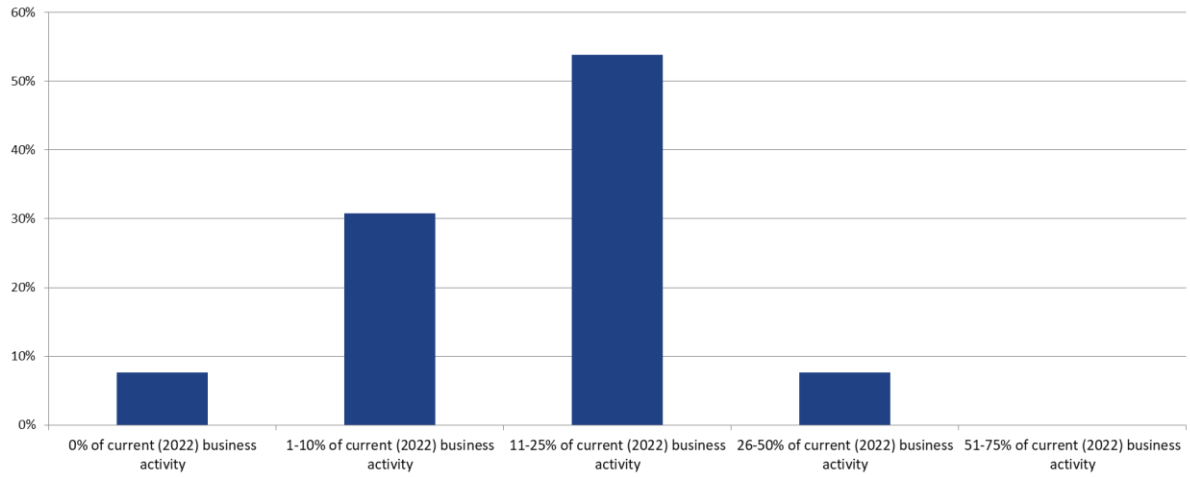
Respondents to the survey expressed a strong interest in the innovation centre enabling collaboration and helping connect with support which could help to translate new ideas into commercial application, the provision of facilities and services to assist manufacturing companies and connecting them with key innovation support services such as SMAS, NMIS, Interface and the services provided by Innovation Centres.

The overall view was that a manufacturing innovation centre should be seen as an opportunity for Moray to market itself more and ensure better linkage and signposting with the outside world. Whatever new initiatives are undertaken it was

considered that they needed to be done well and a new manufacturing innovation centre should become a centre of excellence in the promotion of best practice and that it should become a permanent feature of the Moray manufacturing landscape able to “Show us the future!.” It would promote the area as a centre of excellence in manufacturing and innovation which would help with the retention of local talent, as well as the attraction of external business investment.

In the survey Moray businesses were asked to provide some indication of what they felt could be the benefits to them of MICM on the growth of sales in their businesses over the next five years based on their 2022 position. Figure 2.13 shows that over 50% of the businesses considered that the overall impact could be between 11-25% of their 2022 baseline sales, although a small percentage suggested it could be higher at between 26-50%. Around 30% considered it would be between 1-10%.

Figure 2.13. Impact of MICM on the growth of sales over the next five years



Potential scope and service requirements

An initial assessment of a long list of options was undertaken to support the preparation of the Strategic Outline Case (SOC) for the project in 2019 and these were refined further during the Outline Business Case (OBC) stage in 2020 (details of this process are provided in Appendix 1). These options have been refined further as part of the development of the Full Business Case (FBC), drawing on a review of the innovation supply-side and demand assessment work as outlined above. In particular, the business case process has explored the need for, and benefits of:

- Enhanced co-ordination of innovation support targeted at manufacturing;
- The need to encourage much stronger interaction between manufacturers and the knowledge base and the ways in which access can be enhanced;
- The property needs of new manufacturing start-ups, in particular the need for flexible unit sizes on easy in, easy out terms, and space on flexible terms for them to grow on once they have “graduated” from incubation space.

The findings from the business case research are that MICM could meet a real need in enabling Moray business to step-up the scale of their innovation activity with all the associated benefits that this could bring in enhanced completeness and economic growth. Key ingredients for success that it should provide:

- Carefully targeted, bespoke packages of support, facilitated through regular presence by key service providers;
- Targeted, themed events, including peer learning, equipment demonstrations, circular economy, net zero – to inspire/help businesses prioritise what they need, drawing in existing programmes (e.g. from CeeD) wherever possible;
- Attractive facilities with relevant space, equipment and technical support which is hard to access. These facilities could encompass:
  - Prototyping space and equipment (including 3D printing)
  - Instrumentation and testing equipment
  - Data analytics support
  - Robotics
- Business incubator units for new start-ups and associated commercialisation support (linked to knowledge base and Business Enterprise Hub);
- Grow on space for scaling businesses.

If MICM is to realise its core ambitions, it should be the primary front door to manufacturing innovation delivery for SMEs in Moray. It should provide high calibre, inspirational and accessible leadership (with a credible manufacturing background) that can spell out clearly to business where they are on the Innovation Ladder, the potential for them to increase their existing levels of innovation to deliver bottom-line benefits and how they can be assisted to do this.

Visibility, clarity of purpose and effective partnership working will be key to MICM's success.

Benefits criteria

Satisfying the potential scope for this investment will deliver the following high-level strategic and operational benefits. The **primary benefits** – linked to the primary aims and objectives of this project - are shown below.

A distinction is made between the strategic catalytic benefits arising from the services delivered by MICM, and the operational benefits arising from the construction and ongoing operation of the facility (Table 2.6). Both have been modelled as part of the Economic Impact Assessment (EIA) work undertaken to support the FBC (see Economic Case).

Table 2.6: Investment objectives and benefits

Class Of Objective	Main Benefits	Benefits Criteria	Stakeholders Affected
Strategic (wider social and business related)	Manufacturing employment Manufacturing GVA Income from employment	Increase business growth Increase business productivity Increase BERD Increase the number of new manufacturing start ups	Local businesses Entrepreneurs Young people 16-29 Other Moray residents
Operational (organisational and management related)	Construction employment Operational employment	FT construction job years Permanent FTEs in MICM operation	Moray residents

Strategic risks

The main business and service risks associated with the potential scope for this project are shown in Table 2.7, along with the steps already taken to mitigate these:

Table 2.7: MICM Strategic Risks at the FBC stage

Risk categories	Description
Business risks	Under-estimation of costs (mitigated through business planning process, risk assessment and Optimism Bias assessment) Failure to generate sufficient income to cover revenue costs (mitigated through diversity of income streams and business planning process that has drawn on both a supply-side and demand-side assessment and Optimism Bias assessment) Competing demands for resources (mitigated through good co-ordination between MICM and other projects to ensure no duplication and maximise synergies) Lack of productive engagement with the business community (mitigated through an OBC business survey, consultation events with the Moray Growth Deal Business Assembly and Chamber of Commerce and an FBC survey).
Service risks	Inadequate management expertise (mitigated by budgeting for the recruitment of a high calibre Project Director and Centre Manager to maximise benefits) Lack of engagement from service providers (mitigated by strengthening the MICM Project Board at FBC stage to include representation from NMIS and SMAS as well as UHI Moray).

Risk categories	Description
External environmental risks	Impact of inflation on capital and revenue costs (both on MICM itself and its impact on business) These risks are, by definition, outside of our control, but we can mitigate to some extent through careful budgeting and use of up–to-date inflation forecasts.

Constraints

The project is subject to the following constraints:

- Compliance with procurement strategies;
- Resources are available to enable the project to be delivered on time and to the right quality;
- The capital works and contract for services can be procured within the timescale required to allow the benefits to accrue;
- The successful implementation of the revenue operating model, including letting incubator and (later) grow-on space and delivering paid-for services.

Dependencies

The project is subject to the following dependencies that will be carefully monitored and managed throughout the project lifecycle:

- The project is dependent on ongoing political support and the relationship between partner organisations;
- Alignment with national / regional developments;
- There is sufficient private sector involvement/ interest to make the revenue model viable;
- Availability of suitable land and premises, identified in the FBC as HIE's Unit 9 for the MICM Hub and Unit 10 and adjacent land for a new build extension for MICM Grow-on space;
- Good alignment with the current National Planning Framework (NPF4) and Scottish Planning Policy (SPP), particularly in the light of the Planning (S) Act 2019;
- Securing building warrants for the capital works;
- Financial approval from the UK Government and Scottish Government for capital and revenue funding for MICM;
- Financial approval from HIE for capital funding for MICM.

3. The Economic Case

Project logic model

The MICM project is expected to lead to material change in the start-up, survival, growth, and competitiveness of manufacturing businesses in Moray. The ways in which it is expected to deliver these benefits are set out in a summary logic model (Table 3.1). A more detailed logic model is provided at Appendix 3.

This shows the way in which the different strands of the project are expected to deliver benefits, moving from the resources used to purchase various activities (advice and support, incubation, and grow-on space), the business performance outputs and outcomes these are expected to deliver and the various ways these can be expected to impact on the Moray economy.

Table 3.1: Logic Model for MICM

Inputs	Activities	Outputs	Outcomes	Impacts
Resources needed to deliver the project.	*Actions needed to deliver the project.*	*Measurable direct results of the activities.*	*Changes that occur to the beneficiaries and the medium-term benefits on the economy.*	*The long-term effect upon the economy or society*
SG £ UKG £ HIE £	More support coverage for indigenous manufacturing businesses	• Increasing business R&D expenditure • New start-ups • Growth and productivity improvements in the indigenous manufacturing base • Inward investment by other manufacturers	Impact on business performance: • Employment • GVA • GVA/employee • BERD	• BERD • GVA • Employment • Productivity
	Incubator space – new start ups			
	Grow-on space			
	Inward investment activity			

Short-listed options

Following the supply-side and demand assessment work conducted at this FBC stage (see Strategic Case), the MICM Project Board has reviewed the project's investment objectives and agreed how MICM should be positioned to maximise its added value within a complex delivery landscape.

Proposed service solution

The service solution that emerged from Project Board options workshop in June 2023 is set out in Figure 3.1 on the following page.

Figure 3.1: Manufacturing Innovation Centre for Moray (MICM) project

Investment Objectives:

- To increase BERD (Business Enterprise, Research and Development) in Moray's indigenous manufacturing companies
- To increase growth, productivity, and efficiency in Moray's indigenous manufacturing companies
- To increase the number of manufacturing start-ups in Moray
- To support the attraction of manufacturing inward investment to Moray.
- To accelerate the transition to net zero in Moray's indigenous manufacturing companies

Core service offer:

Playing an active role in cluster management (advanced manufacturing, multi-sector)
Developing a detailed assessment and baseline of productivity and net zero performance, needs and opportunities for each manufacturing business
Effectively co-ordinating service delivery (deploying HIE, UHI (MAATIC), NMIS, SMAS, Interface, Innovation Centres, Business Energy Scotland etc.), guiding/steering businesses to the best solution for them and the most suitable providers
Supporting product and process innovation projects in businesses

Key tasks:

Sector leadership: inspiring, assessing needs, co-ordinating, persuading, joining up
Awareness: marketing, promoting, demonstrating, organising events
Technical: demonstrating equipment and new technologies with MICM buildings as net zero

Property:

MICM HUB (Unit 9, Enterprise Park Forres)				**MICM Grow-on space** (Unit 10 and adjacent new build expansion, at Enterprise Park Forres) 4 industrial units totalling 793 sq. m
6 x 40-70 sq. m incubator units	Demonstration and technical space	Net zero demonstrator	Service provider and private sector desk space	

Horizon Scotland (existing events space to be used by MICM)
Wider space cluster activity

In the period since the preparation of the original MICM OBC there has been substantial change to the MAATIC Growth Deal project and its geographical location in relation to MICM. It has therefore been decided that MICM should be located at the Enterprise Park Forres as a stand-alone facility where it can be amongst other manufacturing businesses, including those at the heart of the North Coast Space Cluster, as well as taking advantage of existing conference facilities at Horizon Scotland.

There will continue to be close collaboration between MICM and MAATIC as well as with the Business Enterprise Hub (BE Hub) project. In parallel with MICM's FBC, the MAATIC and BE Hub projects have also been developing their own FBCs. As outlined at the OBC stage, MICM intends to work closely with both projects to optimise the customer journey for both businesses and individual entrepreneurs. In relation to MICM/MAATIC engagement, this will mean that where MICM engagement identifies skills needs, it will facilitate rapid access to relevant advanced manufacturing skills support through MAATIC in the first instance. The same will apply where it identifies management training and broader entrepreneurship skills development needs, where it will signpost to BE Hub. MAATIC and BE Hub have also mapped out the customer journey for referrals *into* MICM, which will provide innovation services and facilities to support entrepreneurship activity, both with MAATIC students (including professional doctorate students) and BE Hub manufacturing service users who need product and process innovation support. Further detail is provided in the Commercial Case.

In parallel with the detailed design process, three Change Requests have been approved for MICM since the OBC stage. These approved a change in project location from land adjacent to RAF Lossiemouth to Enterprise Park Forres (CR1) as well as approving the principle of using existing premises to facilitate a more rapid start to the project (CR2). The most recent Change Request (CR3) was approved by the MGD Board in May 2023 and validated by the MICM Project Board at an options workshop in June 2023. This specified the following FBC options for appraisal.

Option 1: Business as Usual – Do Nothing – No Growth Deal Funding

Option 1 is the Business as Usual option that assumes no Growth Deal funding. This is the Reference Case against which the performance of other options can be judged. Under this scenario and given the tight fiscal environment and other funding priorities, MICM would not happen. Project development costs have been incurred to bring the MICM project to FBC stage (£134,000). These sunk costs are included in Option 1.

In addition to Option 1, two intervention options have been appraised as part of the Full Business Case. The options are identical in relation to service offer (and thus revenue model) but take a different approach to the delivery of the capital project.

Option 2: Phase 1 MICM Hub (in refurbished premises) and Phase 2 grow-on space (mix of refurbished premises and new build)

In this option the MICM Hub (Phase 1) would be provided quickly through a reconfiguration of the HIE-owned Unit 9 at Enterprise Park Forres. This light industrial unit was constructed in 2009, is heated using ground source heat pumps, and is about to be vacated by a growing electronics manufacturer which is in the process of expanding elsewhere on the Park. The design of this building with a ground floor, mezzanine and sloping roof, has made it difficult to let on a sustainable basis for manufacturing, but its internal layout lends itself well to the MICM requirement.

With relatively limited reconfiguration required (the work package is set out in detail in the Commercial Case), the capital works on the MICM Hub would be complete during 2024. These works will include solar PV, insulation and LED lighting improvements. This will also support MICM in its role as a net zero demonstrator, with additional sensors and measurement displays helping to demonstrate how businesses can monitor and improve their existing premises in a cost-effective manner as they embark on their own net zero transition.

The intention is for a MICM Director to be appointed in spring 2024 (see Commercial Case). They will start developing MICM's presence with local business immediately and ensure that the project can progress quickly as soon as the MICM Hub is available in autumn 2024. The Director's work will include active co-ordination with service providers (notably NMIS, SMAS, CeeD and Interface) to ensure a regular presence at MICM and their involvement in organisation of MICM events, as well as liaison with MAATIC, BE Hub, Business Gateway and HIE's own business support programmes to market the six incubator units (40-70 sq. m each) and other flexible workspace.

The MICM Hub will also have a technical and demonstration space that features a range of specialist prototyping and testing equipment (e.g., 3D printing), helping it to play an active role in supporting product and process innovation for business as well as demonstrating relevant, accessible technologies and persuading them to invest in their internal processes to move up the innovation and net zero ladders. A MICM Centre Manager will be appointed by autumn 2024 to take on the responsibility of managing MICM's technical and demonstration activity. Part-time administrative/marketing support will also be needed and this will come on stream in 2024/25 as well.

The provision of MICM grow-on / accelerator space in a later phase will support the MICM customer journey for those businesses in Hub incubators, enabling them to move on to larger modern industrial premises on Enterprise Park Forres while remaining part of the "MICM family" with continued access to MICM Hub support as required. Once again, the project is following the principle of repurposing an existing building rather than new build. Here the proposal is for existing commercial premises at HIE-owned Unit 10 (already fitted with air source heat pumps) to be reconfigured to three units of approximately 150 sq. m, supplemented by a 250 sq.m new build unit with air source heat pumps and solar PV panels. The new unit would be on land immediately adjacent to Unit 10 owned by HIE with outline planning consent for industrial use. These units are a very short walk from Unit 9 / the MICM Hub and at the very heart of Enterprise Park Forres, adjacent to Orbex and the emerging space cluster. The intention is to have these units ready for occupation

from 2027/28, in Year 4 of the MICM Hub's operation, by which time it is anticipated that one or more occupants from the incubator space will be looking to move on to larger premises.

MICM incubators will be on flexible "easy in, easy out" terms and the grow-on space will be on short, 2-3 year leases. Flexible and short lease terms, and the inherently higher risk profile of new start-up or early stage businesses, are not an attractive proposition to property developers. In Moray there is little speculative development of even mainstream premises for established businesses on standard leases. This is why, in Option 1, without Growth Deal funding, nothing would be delivered. Crowding out is not a concern given this specialised floorspace.

It is always difficult to demonstrate demand in markets that do not currently exist, but there is clear evidence of unmet demand for incubator space in Moray. Horizon Scotland is at 110% occupancy with a waiting list, with some businesses there now having to occupy meeting rooms. The proposed MICM incubator space is also entirely complementary to the activities of MAATIC and the BE Hub project in Elgin. The former will provide desk space for researchers and the latter will provide pre-incubation space for start-ups across all sectors as well as wider management skills support for established entrepreneurs. Further discussion on the complementarity of the three projects and the arrangements in place to ensure co-ordination can be found in the Commercial Case.

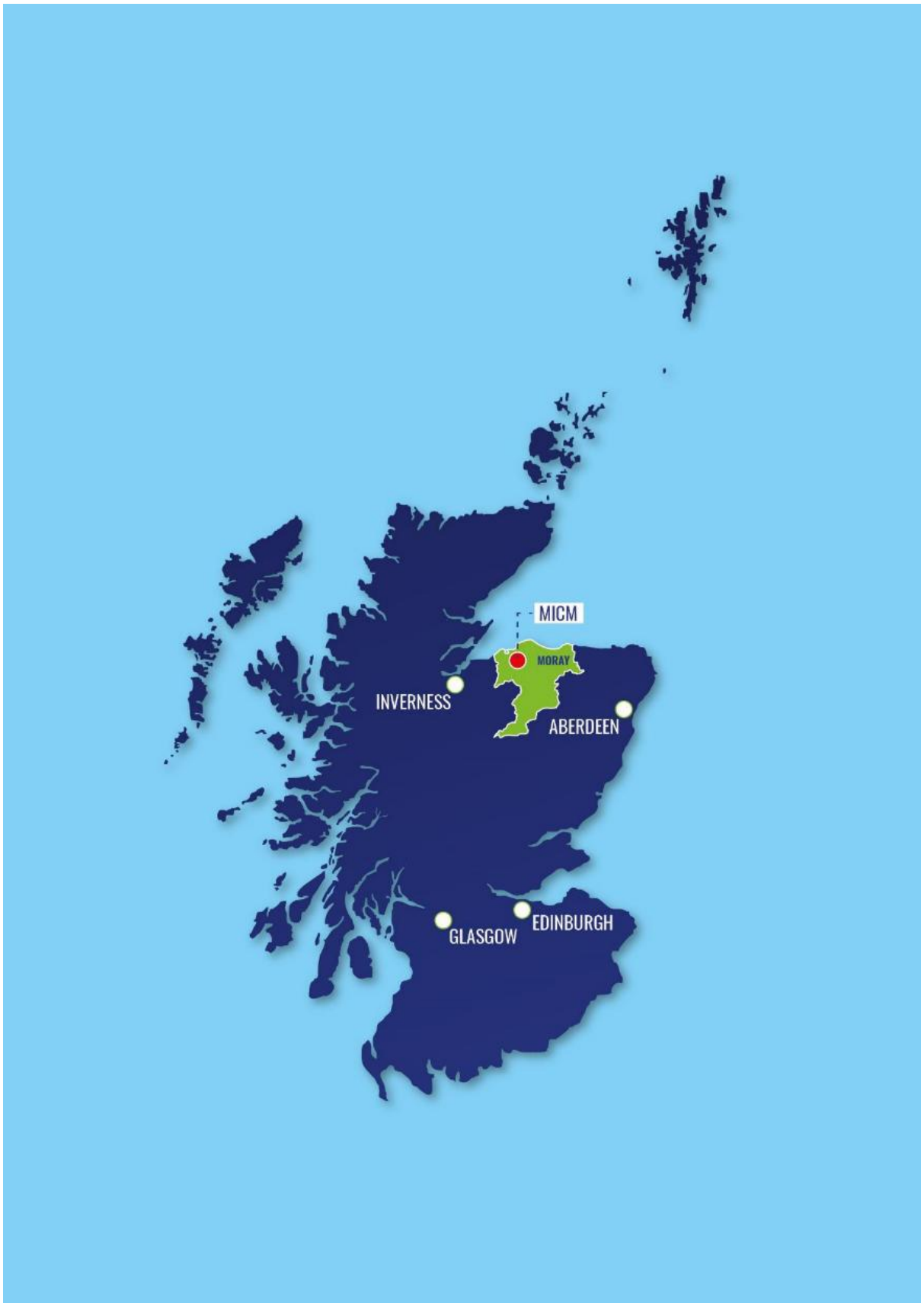
A key feature of MICM's operation is to facilitate access by as many existing businesses as possible to practical manufacturing innovation support that will make a difference to their bottom line. MICM will actively co-ordinate existing service delivery to ensure that business access expertise and funding already available from HIE, the National Manufacturing Institute for Scotland (NMIS), the Scottish Manufacturing Advisory Service and Innovation Centres as appropriate to each case. It is anticipated SMAS, NMIS (operated by the University of Strathclyde) and Interface will be present at MICM on a regular basis and actively involved in supporting delivery and that there will be well-established links and cross-referral mechanisms with MAATIC and BE Hub as described above. This proactive collaboration will lead to Moray businesses developing more collaborative R&D projects and Knowledge Transfer Partnerships to translate ideas into workable prototypes, accessing relevant Innovation Centres and Catapult facilities as needed.

MICM will stimulate demand through targeted engagement and free demonstration activities and events as well as a free initial diagnostic service in a concerted effort to maximise interest and take-up. The business survey detailed in the Strategic Case shows a clear, unmet demand for practical "how to" support. The MICM business model assumes that MICM will provide paid-for services for specific project support to individual businesses. The revenue model also assumes that as it gains momentum, MICM will attract private sector funding from OEMs to support its delivery activity. The Commercial Case provides further detail on the operating model.

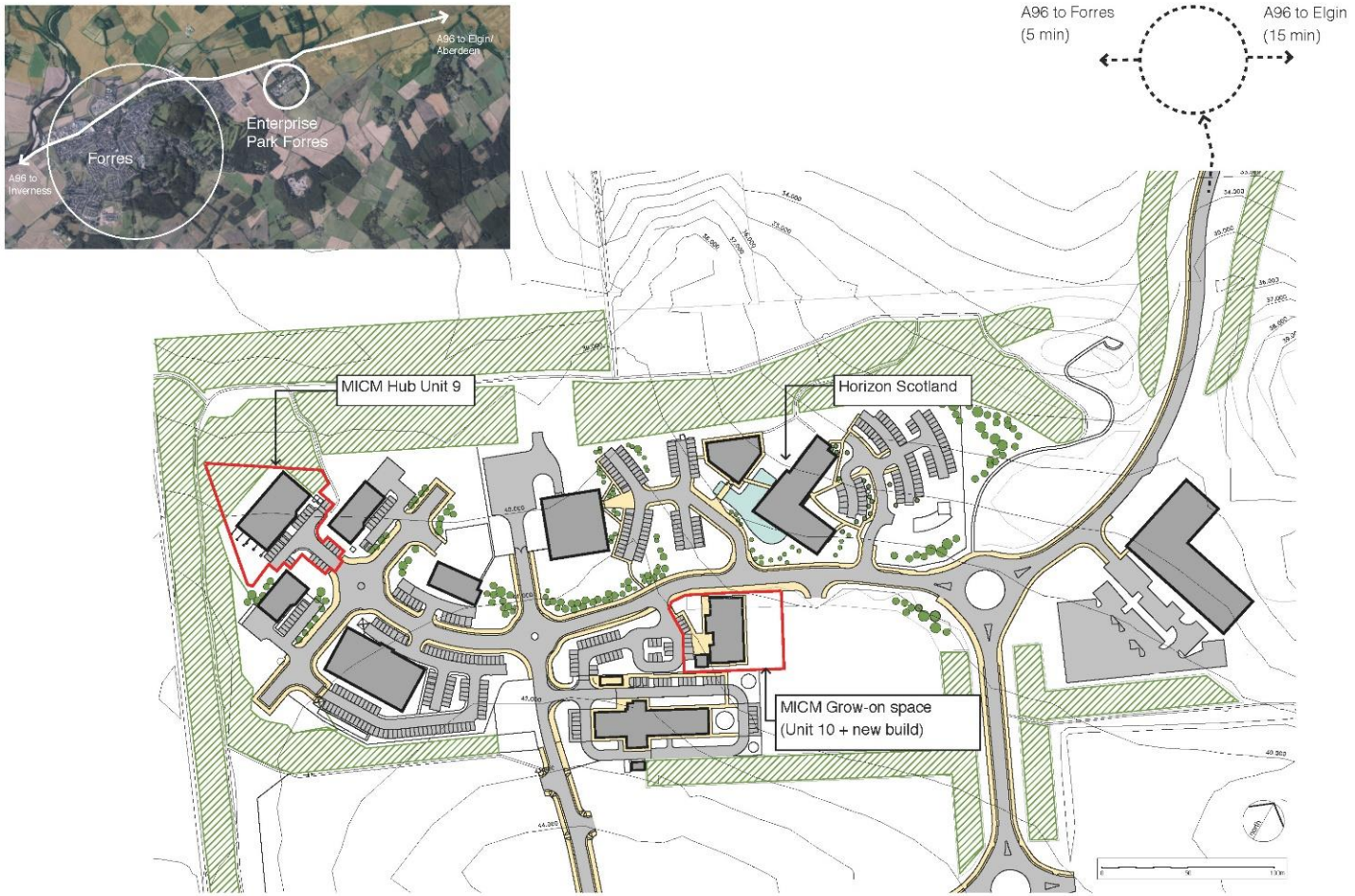
By re-using two existing buildings the project can proceed more quickly and at lower capital cost than new build. From a net zero perspective, this approach will also offer a much better demonstration to other businesses of how existing commercial premises can be upgraded. Importantly it will also consume less embodied carbon

in the construction process. It will be an immediate statement of MICM's intent to show businesses how they can make important incremental changes to decarbonisation in ways that have a positive impact on the bottom line. This will compliment MICM's wider efforts to support businesses in decarbonising their operations. Plan 3.1 shows MICM's location of Enterprise Park Forres in a Scottish and Moray context, and Plan 3.2 shows the location of the Unit 9 and Unit 10 plots at Enterprise Park Forres.

Plan 3.1: Location of Enterprise Park Forres



Plan 3.2: Enterprise Park Forres layout, showing location of the MICM Hub (at Unit 9) and MICM Grow-on space (at Unit 10 with adjacent new build)



Option 3: Phase 1 MICM Hub (in new premises) and new Phase 2 grow-on space

Option 3 assumes the same concept, service provision, floorspace configuration and equipment specification as Option 2. However, in this option the MICM Hub is a new build. This accords with the approval to Change Request 3 (May 2023) that a new build comparator should be one of the FBC options.

Economic Appraisal

Introduction

This section provides a detailed overview of the main costs, benefits and value for money associated with each of the selected options, and the approach taken to determining the preferred option.

Estimating Benefits

The benefits associated with the project have been modelled through an Economic Impact Assessment conducted by Colin Warnock Associates (CWA) to support the MICM FBC process. They follow the same broad assumptions set out in the OBC, albeit modified with more precise estimates of floorspace and timing. Benefits have been profiled per annum for a 25-year period from 2024/25 onwards.

Description, sources, and assumptions

The benefits fall into the following main categories:

- One-off benefits from the construction process and procurement of equipment (Options 2 and 3). These temporary benefits are excluded from the value for money calculation;
- Operational benefits associated with the ongoing operation of MICM, its employment of three staff (2.5 FTEs) as well as occupancy of the incubator units;
- Catalytic, or further generated benefits, associated with:
    - The additional penetration of innovation support services amongst indigenous manufacturing businesses in Moray and enhancements to their performance (Options 2 and 3)
    - Business acceleration benefits arising from the graduation of businesses from MICM Hub incubators and their further growth, facilitated by the MICM grow-on units (Options 2 and 3)
    - Additional inward investment to Moray resulting from the cluster development activities attributable to MICM's innovation activity (Options 2 and 3).

The benefits above are assumed to be identical between Options 2 and 3. The only difference is in the approach to the capital build, but the service solution is assumed to be the same and to deliver the same economic impact.

Carbon assessments have been prepared by Graham and Sibbald to support the FBC process and they will also prepare RICS Whole Life Carbon Assessments at RIBA Stage 4 (detailed design). These cover:

- Capital (embodied) carbon: this is a one-off disbenefit associated with the construction process and the materials used in each option
- Operational carbon: this is an annual disbenefit associated with the energy consumption associated with the MICM premises under each option.

All these benefits have been modelled over 10, 15 and 25 years to estimate the net additional employment, income, GVA and carbon impacts at the Moray, Highlands and Islands, Scotland, and UK levels, where:

- **jobs** are expressed as net additional full time job years, after taking account of leakage, product market displacement, labour market substitution and indirect and induced multiplier effects.
- **income** is expressed in net additional terms, after the same additionality adjustments as for jobs, as a Present Value in constant 2023/24 prices, after discounting at the Social Time Preference Rate (3.5%) in line with HM Treasury Green Book guidance (2022)
- **Gross Value Added (GVA)**, is also expressed in net additional terms as a 2023/24 Present Value, after discounting in the same way as the income streams
- **capital carbon and operational carbon** are presented separately as monetary 2023/24 Present Values after discounting using the Social Time Preference Rate.

The methodology, key assumptions and more detailed results tables can be found at Appendix 2 while the carbon assessments are provided at Appendix 11.

The Economic Impact Assessment has assessed the impacts associated with the construction phase of the project separately. These impacts are not included in the value for money assessment but are provided in the detailed tables in Appendix 2.

Estimating Costs

Capital and revenue models have been developed by the project team, supported by Torrance Partnership (capital), and Graham and Sibbald and CWA (revenue). The cashflows developed are internally consistent with the assumptions used in the economic impact assessment, particularly around the development occupancy of premises over time.

Capital and revenue costs have been profiled per annum from 2023/24 onwards. Phase 1 capital costs will be based on tendered prices for works to Unit 9. Those for Phase 2 (grow-on units) are based on recent tender evidence for similar building types procured by HIE in the last year, with appropriate adjustments for scale and uplifts for inflation to 2023/24 prices. (Although not relevant for the Economic Case, the Financial Case allowances for future inflation to 2027/28 have been made based on BCIS forecasts provided by Torrance Partnership. The inflation allowance for

2028/9 is an assumption based on the BCIS forecast trend for the period 2023/24 to 2027/28).

Rental income estimates have been made through discussion with Graham and Sibbald, HIE's retained property agent, and have also been informed by HIE's direct, recent experience of letting property at Enterprise Park Forres, including incubator space at Horizon Scotland.

Contingency levels included in the capital and revenue models are discussed later in this section (see Risk Appraisal). For value for money analysis purposes only, the capital costs and works duration have been subject to an Optimism Bias (OB) Assessment which can be found in Appendix 4. In relation to capital costs, the project now involves reconfiguration to primarily existing commercial premises owned by HIE with the new build element a standard build to an existing HIE design. In OB terms the project category is "standard buildings." Unmitigated OB at FBC stage has been assessed at 4.8% on capital costs. An OB adjustment of 5% has therefore been applied to the base capital costs (including contingency) for Options 2 and 3.

The assessed unmitigated OB on works duration for a standard building (1.2%) would lead to a very modest extension of a 6-9 month construction programme. Given the inclusion of a reasonable contingency sum already, the impact of OB on works duration has been treated as de minimis for the purposes of economic appraisal.

No ready-reckoners are available for Optimism Bias on revenue costs. However, given the sensitivity of the revenue model to assumptions around rental streams and paid-for services (see Commercial Case and Financial Case), unmitigated OB of 15% has been added to revenue costs for the purposes of the value for money appraisal.

Economic Appraisal

An economic appraisal for the two intervention options is provided in Table 3.2. This presents the Present Value of a 15-year stream of the GVA benefits and carbon disbenefits at the Moray level, the associated Present Value of Net Costs over the same period (after adjustment for Optimism Bias), the resulting Net Present Social Value and the Benefit Cost Ratio.

The results are in line with those forecast at OBC stage (Benefit Cost Ratio of 5.7:1 at the Moray level over 15 years at OBC, compared with 6.4:1 at FBC). Option 2 has a higher Benefit Cost Ratio than Option 3 and a higher Net Present Social Value. Option 2 is cheaper in capex terms because it repurposes Unit 9. Although not reflected in the relative benefits (which have been modelled to be identical), Option 3 will also take 9-12 months longer to achieve an operational start, since it would require a more complex detailed design process and it is reasonable to expect that achieving a building warrant would take longer, in addition to a longer build period.

Table 3.2: Appraisal Summary Table – 15 years at the Moray level

		Option 2 MICM Hub re-using Unit 9 / New grow-on space	Option 3 New build MICM Hub and grow-on space
A	Present Value (2023/24) of Net Additional GVA benefits and carbon disbenefits at the Moray level over 15 years £m	£40,144,579	£39,947,076
B	Present Value (2023/24) of Net Additional Costs (£m) adjusted for Optimism Bias	£6,234,244	£12,385,869
C	Net Present Social Value (£m) [A-B]	£33,910,335	£27,561,207
	Benefit Cost Ratio [(A / B]	6.4	3.2
	Benefits Switching Value (% reduction in PV of benefits for BCR to be less than 1)	-84%	-69%
	Costs Switching Value (% increase in PV Net Costs required for BCR to be less than 1)	643.9%	322.5%

Note 1: benefits are the operational and catalytic GVA benefits of MICM and capital and operational carbon disbenefits; the temporary GVA benefits arising from the project's construction are excluded from the NPSV and BCR analysis
Note 2: costs and benefits are over and above Option 1 Business as Usual / No MGD funding reference case
Note 3: costs and monetised GVA benefits and carbon disbenefits have been discounted at a rate of 3.5% (the Social Time Preference Rate) to a base year of 2023/24 (year 0), the year of appraisal
Note 4: 15 years means the period starting in year 1 2024/25 and ending in year 15 2038/39

Table 3.2 also presents switching values for both benefits and costs. Based on 15 years of benefits and costs at the Moray level, it would take a reduction of 84% in the benefits before Option 2 had a BCR of 1:1 and costs would need to increase more than six-fold. This demonstrates the strong resilience of the value for money of this option to potential changes in costs or benefits.

Table 3.3 shows the relative performance of Option 2 over 10, 15 and 25 years. The performance of Option 2 becomes even more apparent over a 25-year period once all the benefits are on stream. Over a 25-year period Option 2 is forecast to have a Benefit Cost Ratio of 9:1 at the Moray level and 11:1 at the Scottish level.

Table 3.3: Appraisal Summary Table – Preferred Option (Option 2) over 10, 15 and 25 years at the Moray, Scotland, and UK levels

	10 years	15 years	25 years
Present Value (PV) net additional costs of Option 2 (adjusted for OB on capital costs)	£6,119,769	£6,234,244	£6,411,783
PV net additional benefits for Moray (incl. carbon, excl. construction)	£27,356,451	£40,144,579	£57,739,169
PV net additional benefits for the Highlands & Islands	£30,470,080	£45,063,149	£65,618,333
PV net additional benefits for Scotland	£28,145,231	£44,485,982	£70,802,141
PV net additional benefits for UK	£17,239,323	£31,092,176	£56,680,003
Benefit Cost Ratio (BCR) – Moray	4.5	6.4	9.0
BCR – H&Is	5.0	7.2	10.2
BCR – Scotland	4.6	7.1	11.0
BCR – UK	2.8	5.0	8.8
Net Present Social Value – Moray	£21,236,682	£33,910,335	£51,327,386
Net Present Social Value – H&Is	£24,350,312	£38,828,905	£59,206,550
Net Present Social Value – Scotland	£22,025,463	£38,251,738	£64,390,359
Net Present Social Value – UK	£11,119,554	£24,857,932	£50,268,221

Option 2 is the preferred option on Value for Money. It delivers the same level of benefits more cheaply, faster, repurposes an existing building and in doing so consumes less embodied carbon in the construction process.

While GVA analysis forms an essential part of the economic appraisal, it is worth highlighting that in employment terms:

- By year 10 Option 2 is expected to generate over 600 net additional job years of employment at the Moray level (over 700 job years at the Highlands and Islands level, over 800 job years at the Scottish level and over 600 job years at the UK level).
- By year 15 this is forecast to have grown to almost 700 net additional job years for Moray (more than 800 job years at the Highlands and Islands level, almost 1000 job years at the Scottish level and over 700 job years at the UK level)
- By year 25 it is estimated that MICM could deliver almost 800 net additional job years in the Moray economy (over 950 at the Highlands and Islands level, over 1,100 job years at the Scottish level and over 900 job years at the UK level).

Further detail can be found in Appendix 5.

Carbon impacts

The carbon impacts of Option 2 are included in the cost benefit analysis above. Appendix 5 provides a Carbon Categorisation Form for the MICM project and Appendix 11 details the carbon assessments undertaken to inform the FBC. In summary, in ***carbon control*** **terms the project is Categorised as 3**, i.e. it has a capital carbon increase and then becomes operational net zero. Table 3.4 below shows that Option 2 has a very small one-off capital carbon disbenefit of £26,724 through the embodied materials used in construction, reflecting the fact that works are minor and non-structural. In operational carbon terms both Unit 9 and Unit 10 will use grid electricity as their primary energy source for light, heat and power, off-set to some extent by power generated by newly installed solar PV panels on both buildings. They will be operationally net zero once the electricity grid is decarbonised, but in the short-term they will have an operational carbon disbenefit which is included in Table 3.4.

Table 3.4 Option 2: additional carbon impacts over and above the Option 1 reference case

Type of carbon impact	Present Value £ 2023/24 prices		
	10 years	15 years	25 years
Capital carbon (embodied carbon from construction materials)	-26,724	-26,724	-26,724
Operational carbon (from building energy demand)	-154,005	-224,391	-346,252
Total carbon disbenefit	**-180,729**	**-251,115**	**-372,976**

In terms of the ***carbon influence*** **of MICM, the project is classified as Category B** for appraisal purposes (see Appendix 5). MICM will actively engage with businesses to influence them on their net zero transition in ways which would support its classification as Category A, but much of this work will be undertaken in partnership

with others. The benefits of this work have not been quantified as part of the Economic Case but will form part of downstream monitoring and evaluation. For that reason, no quantitative benefits arising from this carbon influencing role are claimed as part of the value for money assessment.

The Preferred option

The MICM Project Board met on 4th August 2023 to consider the output of the economic appraisal above. Following discussion and a review of the key assumptions underpinning the Economic Impact Assessment, the Project Team recommended Option 2 as the preferred option to take forward for detailed planning in the Commercial, Financial, and Management cases of the Full Business Case.

Key Assumptions

Option 2 is detailed in full in the Commercial Case (Section 4)

The detailed assumptions which underpin the cost assumptions are set out in Section 5 (Financial Case) and the EIA assumptions are detailed in Appendix 2.

Risk appraisal and sensitivity testing

The level of risk in Option 2 has been accounted for in the capital and revenue models by the application of a 5% contingency to all capital works, a further 10% contingency to the Unit 9 capital works to reflect design immaturity and a 10% contingency to all revenue costs. As noted above, for value for money assessment purposes unmitigated Optimum Bias of 5% on capital expenditure and 15% on revenue expenditure has been applied to the economic costs.

Table 3.5 describes the key risks which will need to be tracked and mitigated, where possible, as part of the project's delivery. The project's live risk register is provided at Appendix 6.

Table 3.5: MICM key risks and their potential mitigation

Risk type	Risk	Potential mitigation
Reputational risk	HIE and Moray Council's reputation amongst community and partners and with Scottish Government and UK Government is damaged by poor project delivery or failure	Focused governance on project development. Appraisal and delivery through the Moray Growth Deal Programme Board and the MICM Project Board
Procurement risk	Risk of legal challenge due to inadequate planning or procurement procedures	Adherence to HIE's well established procurement frameworks to deliver the project
Planning risk	Risk that building warrant is not granted for the refurbishment of Unit 9 or grow-on space	Compared with the OBC, planning risks are significantly reduced. No issues are anticipated with obtaining a building warrant for Unit 9 refurbishment and Enterprise Park Forres benefits from outline planning consent for industrial use which will pave the way for detailed planning and building warrants for the grow-on space in due course.

Risk type	Risk	Potential mitigation
Build risk	Risk that capital costs exceed those forecast due to inadequacies in the design, procurement, and project management process.	Ensuring clarity of the client-side design process (see governance above), robust procurement and project management procedures to minimise scope creep and contractor claims.
Project intelligence / environmental risk	Unanticipated external risks cause delays or other impacts on project performance	Mitigated through regular liaison with key stakeholders, including Scottish and UK Governments
Operational risk	Delay to, or lower quality, recruitment of key project staff	Benefits Realisation Plan has already anticipated the timing of preparation of job description and allowing sufficient time for high quality recruitment. This will be further mitigated by recruitment of a MICM Director via a secondment route well ahead of building opening.
Revenue risk	Risk of revenue shortfall due to lower than anticipated take-up of services, incubator units or grow-on space	Mitigated by void assumptions in business planning and evidence-based assumptions from elsewhere, together with ongoing monitoring and good quality management and oversight through governance arrangements
Utilities risk	Risk of delays to, or higher cost provision of key utilities	Mitigated by early site investigations and appropriate, evidence-based, cost assumptions
Funding risk	Risk that anticipated MGD funding from UK and Scottish Governments and/or HIE is not available or not available at the anticipated level	Mitigated through the business case process by early sighting on funding requirements and building a robust case for approval.

A cross-option risk scoring process has not been undertaken for this project. Both of the short-listed options require substantial capital investment of a similar type and the only difference between them is the extent of new build vs refurbishment. Their risk profile is regarded as identical in relation to option choice.

The risk level of this project is judged by HIE to be acceptable at this stage. Further work is currently being undertaken to develop the detailed design for Option 2. In the Management Case, a Benefits Realisation Plan is provided demonstrating the actions which need to be taken to move the project the next stage of detailed design to procurement.

At this stage, the principal concern is whether Option 2 is resilient to changes in key performance parameters. The following two sensitivity scenarios have been modelled to assess their impact on Option 2's value for money.

- **Scenario 1: Impaired financial performance**
    - Capital expenditure is assumed to increase by 10% more than the current assumptions (in a base model which already includes the contingencies and Optimism Bias adjustments described above)

- Rental income from incubators and grow-on units and paid-for service income is assumed to be 10% lower than forecast from day 1 (on a base model which already includes a void rate assumption for the MICM incubator units, contingency and an Optimism Bias adjustment)

- **Scenario 2: Reasonable worst-case scenario**
  - Capital expenditure is assumed to increase by 20% more than the current assumptions
  - Total rental and paid-for service income is assumed to be 20% lower than forecast from day 1.

The base case performance of Option 2 is compared with the results of these two sensitivity tests in Table 3.6 on the following page over all three time periods and all four geographies.

In BCR and NPSV terms the value for money for Option 2 remains good even in the more pessimistic Scenario 2.

After considering the risk profile of the options, undertaking switching value analysis and testing its sensitivity to changes in key parameters, **Option 2 remains the preferred option on grounds of cost, benefits, risk and overall value for money**.

Table3.6. Option 2: value for money resilience to sensitivity test Scenarios 1 and 2 over 10, 15 and 25 years

	Over 10 years			Over 15 years			Over 25 years		
	Base case	**Scenario 1**	**Scenario 2**	**Base case**	**Scenario 1**	**Scenario 2**	**Base case**	**Scenario 1**	**Scenario 2**
Present Value (PV) net additional costs (£m) of Option 2 (adjusted for Optimism Bias)	£6,119,769	£6,724,361	£7,328,954	£6,234,244	£6,921,619	£7,608,993	£6,411,783	£7,227,543	£8,043,303
PV net additional benefits for Moray (incl. carbon, excl. construction)	£27,356,451	£27,356,453	£27,356,456	£40,144,579	£40,144,582	£40,144,584	£57,739,169	£57,739,172	£57,739,174
PV net additional benefits for the Highlands and Islands	£30,470,080	£30,470,083	£30,470,085	£45,063,149	£45,063,151	£45,063,154	£65,618,333	£65,618,335	£65,618,338
PV net additional benefits for Scotland	£28,145,231	£28,145,234	£28,145,236	£44,485,982	£44,485,984	£44,485,987	£70,802,141	£70,802,144	£70,802,146
PV net additional benefits for UK	£17,239,323	£17,239,326	£17,239,328	£31,092,176	£31,092,178	£31,092,181	£56,680,003	£56,680,006	£56,680,008
Benefit Cost Ratio (BCR) – Moray	4.5	4.1	3.7	6.4	5.8	5.3	9.0	8.0	7.2
BCR – H&Is	5.0	4.5	4.2	7.2	6.5	5.9	10.2	9.1	8.2
BCR – Scotland	4.6	4.2	3.8	7.1	6.4	5.8	11.0	9.8	8.8
BCR – UK	2.8	2.6	2.4	5.0	4.5	4.1	8.8	7.8	7.0
Net Present Social Value – Moray	£21,236,682	£20,632,092	£20,027,501	£33,910,335	£33,222,963	£32,535,591	£51,327,386	£50,511,629	£49,695,871
Net Present Social Value – H&Is	£24,350,312	£23,745,722	£23,141,131	£38,828,905	£38,141,533	£37,454,161	£59,206,550	£58,390,792	£57,575,035
Net Present Social Value – Scotland	£22,025,463	£21,420,873	£20,816,282	£38,251,738	£37,564,366	£36,876,994	£64,390,359	£63,574,601	£62,758,843
Net Present Social Value – UK	£11,119,554	£10,514,964	£9,910,374	£24,857,932	£24,170,560	£23,483,188	£50,268,221	£49,452,463	£48,636,705

4. The Commercial Case

Required Services

Capital works

The capital works associated with the Preferred Option comprise the following:

- The MICM Hub which will be located at existing Unit 9 at Enterprise Park Forres
- MICM Grow-on units which will be located at existing Unit 10 at Enterprise Park Forres as well as a 250 sq.m new build development immediately adjacent to Unit 10.

The works are summarised in Table 4.1 below. Appendix 7 provides a more detailed breakdown of anticipated construction works. These will be refined as part of the detailed design process.

Table 4.1: MICM Option 2 (Preferred option) – capital works

Capital works	Summary
MICM Hub (Unit 9)	• Minor strip out works • Alterations to lift position • New front door, new doors to reception and a new large external door to the ground floor technical/demonstration area to enable access for large pieces of equipment • Strengthening of floors in ground floor technical/demonstration area with concrete plinths to support heavy equipment • Alterations to three existing lab units, including benches, to deliver 3 x incubator units • Sub-division of ground floor storage space for 2 x incubator units • Removal of internal partition between two smaller floor meeting rooms to create 1 x incubator unit • Works to first floor mezzanine area, enclosing this from ground floor technical / demonstration area and providing new tea/coffee area and touchdown space • Improvements to stair balustrades • Alterations to existing underfloor heating as required • Upgrade incoming electrical supply, with Phase 3 power to each of the incubator units • Upgrade existing power and data installations • Futureproofing for future installation of compressed air • Upgrade light fittings to LED • Upgrade access control to principal internal doors • Solar PV to roof • Improve roof insulation and acoustic performance (internally) • Refresh of decoration and upgrade to signage • Review and upgrade fire/security as required
MICM Grow-on space (Unit 10 plus new build)	• Minor alterations to Unit 10 core (shared) area • Unit 10 new roller shutter door • Sub-division of Unit 10 (incl. services) to form 3 units • Upgrade to LED lighting throughout • Link facility to new floorspace • new 250 sq.m (gross) single story unit, linked to Unit 10 to manufacturing specification with office accommodation, 3-phase power, Air Source Heat Pump and Solar PV • general site works forming access road, car parking for new unit • allowance for SUDS, rainwater, foul water sewers etc. and provision for storm cell attenuation

Capital works	Summary
	• allowance for external services (electricity, broadband, water)

Table 4.2 summarises the floorspace created following the capital works described above and sets out the rents which the Financial Case assumes will be charged for each type of space. These rents are in line with market rents and those that are currently being achieved for new tenancies at Enterprise Park Forres.

Table 4.2: MICM Option 2 (Preferred option) – floorspace, lease terms and rents

Location on Enterprise Park Forres	Type of floorspace	Quantity	Lease terms and rent assumed
MICM Hub (Unit 9)	Incubator unit 1	39.1sq.m (429 sq.ft)	12 month license, 1 month termination either side. £15 per sq.ft per annum, all-inclusive, except for sub-metered electricity, including rates/water/cleaning/broadband
	Incubator unit 2	59.5 sq.m (639 sq.ft)	
	Incubator unit 3	40.4 sq.m (435 sq.ft)	
	Incubator unit 4	68 sq.m (731 sq. ft)	
	Incubator unit 5	68 sq.m (731 sq. ft)	
	Incubator unit 6	62.7 sq.m (674 sq.ft)	
	Rentable desk spaces	6 x c.5 sq.m	£208 per month (£2,500 pa) for desks 1-4 and £333 for desks 4-5. 12 month license, 1 month termination either side, fully inclusive
	Meeting room (7.3x4.7m)	33.9 sq.m (365 sq.ft)	Rental per hour £35, half day £90, full day £170 (£500 pm assumed)
	Other office/touchdown space	c. 125 sq.m (1360 sq.ft)	N/A – MICM space
	Technical/demonstration space	c. 210 sq.m (2260 sq.ft)	N/A – MICM space
MICM Grow-on Space	Grow-on unit 1 (Unit 10)	152 sq.m (1536 sq.ft)	£9 per sq.ft per annum, based on a 2-3 year lease, including pro-rata share of core space
	Grow-on unit 2 (Unit 10)	154 sq.m (1657 sq.ft)	
	Grow-on unit 3 (Unit 10)	154 sq.m (1657 sq.ft)	
	Core space (lobby / WCs) in Unit 10 (subject to service charge)	83 sq.m (893 sq.ft)	
	Grow-on unit 4 (new build)	250 sq.m (2690 sq.ft)	

Revenue services

The revenue services associated with the Preferred Option are set out in Table 4.3 below. The delivery of these services is discussed later in this section.

Table 4.2: MICM Option 2 (Preferred option) – revenue services

Services to be delivered	Detail
MICM Project Delivery	• Provision of MICM Director (full-time, 35 hours per week) to job and person specification defined by HIE (gross salary £75,000 pa) • Provision of MICM Manager (full-time, 35 hours per week) to job and person specification defined by HIE (gross salary £45,000 pa) • Provision of MICM Administrator (part-time, 20 hours per week) to job and person specification defined by HIE (gross salary £15,750 pa / Real Living Wage) • All marketing and promotion of MICM including website development and maintenance and search engine optimisation (SEO) support • Event organisation, including venue hire, speakers, marketing/promotion and cost

Services to be delivered	Detail
	recovery through sponsorship • Focused engagement with manufacturers to understand needs, develop baseline and identify priority process/product and net zero improvement projects which will benefit their bottom line • Partnership development and co-ordination of inputs from other projects/service providers, notably MAATIC, BE Hub, NMIS, SMAS, Innovation Centres and HIE • Delivery of MICM paid for services and contracting, invoicing and recovery of associated revenues • Proactive role in wider cluster development activity • Performance monitoring and engagement in evaluation activity
MICM Premises Management and Administration	• Management, operation and maintenance of technical / demonstration space • Tenant lettings and tenant management of the MICM Hub's incubator, desk space and meeting room as well as MICM Grow-on space • Contract supervision (e.g. cleaning, security, building maintenance not covered by HIE hard FM services) • Invoicing and collection of rents from tenants and any other revenues due from other parties plus financial management of all aspects of MICM with a dedicated cost centre • Health & Safety Management • Environmental Management • Risk Management • Emergency call-out management

How will MICM co-ordinate its services to SMEs with SMAS?

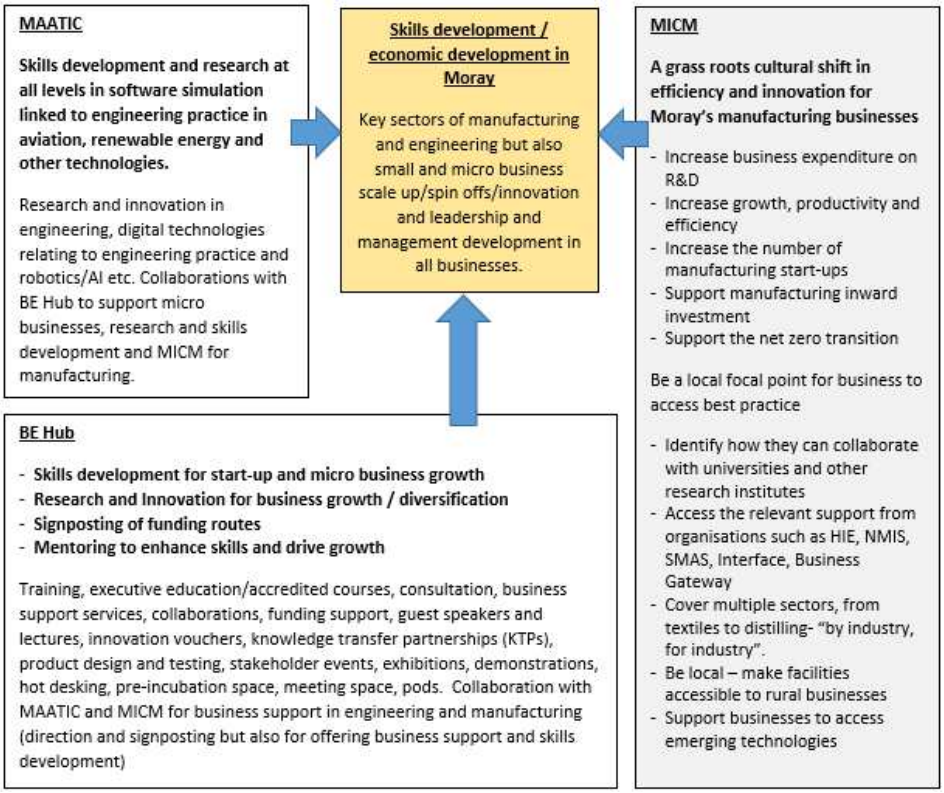
SMAS and MICM will work in close partnership in supporting Moray's manufacturing businesses and will offer complementary support. SMAS has a clear focus on supporting improvements in productivity, culture and behaviours leadership while MICM will support businesses moving from improvement to innovation. A good example of this synergy is the clear pathway from SMAS's promotion of digital technology through the Industry 4.0 reviews through to MICM's proposed support for businesses to implement digital solutions.

MICM will also support SMAS by referrals and signposting and by extending the reach of the innovation network into the parts of the manufacturing sector in Moray who do not currently fully engage with the public sector.

How will MICM co-ordinate its services to SMEs with MAATIC and BE Hub?

Figure 4.1 shows how MICM will be differentiated from MAATIC and BE Hub and how the three projects will work collaboratively.

Figure 4.1:



Contribution of MICM, MAATIC and BE Hub to Moray's economic development

Table 4.3 details the services that will be delivered by each of the three Growth Deal projects.

Table 4.3: MICM, MAATIC and BE Hub service delivery

Service type	Service detail	Project		
		MAATIC	MICM	BE Hub
Training / teaching	Aircraft maintenance degree	Y		
	Non-aviation engineering degrees and apprenticeships	Y		
	Master programmes	Y		Y
	Apprenticeship	Y		Y
	Commercial CPD and micro-credentialing	Y		Y
	Executive programmes (MBA/DBA)	Y		Y
	Accredited and non-accredited CPD courses (leadership and management, leadership behaviours, IT, project management, analytics, cyber security	Y		Y
STEMD	STEMD activities	Y		
Research	Doctor of Business Administration	Y		Y
	Business PhDs	Y		Y
	Other PhDs (including part time and distance)	Y		Y
	REF-able research	Y		Y
	Innovation vouchers		Y	Y
	Management Knowledge Transfer Partnerships	Y		Y
	Masters by research	Y		Y
	Collaborative work with NMIS		Y	
	Collaborative work with other HEIs	Y		Y
Business mentoring,	SMAS presence		Y	
	Interface presence		Y	Y

Service type	Service detail	Project		
support, networking, and support	HIE presence		Y	Y
	Chamber of Commerce presence			Y
	Business Gateway presence			Y
	Exhibition space			Y
	Networking events and activities	Y	Y	Y
	Strategic liaison support and signposting	Y	Y	Y
Accessible R&D	Digital manufacturing space		Y	
	Digital design lab / studio	Y	Likely	
	Distributed factory capacity		Likely	
	3D printer lab	Y	Y	
	Robotics lab (demo, coding, signposting and installation advice)	Y	Y	
	Flexible / reconfigurable manufacturing bays		Y	
	Heavy lifting facilities	Y		
	Clean research space	Y		Y
	Consumer / product testing space			Y
Incubation space	Pre-incubation space (hot desks) or small office space	Y	Y	Y
	Incubation space on flexible terms	Y	Y	
	Associated enterprise support delivery		Y	Y
	Accelerator / grow on space		Y	
Other space	Flexible event space / common space (multi-purpose, multi size with high quality AV)		In Horizon Centre, no revenue	Y
	Net zero demonstration facilities		Proposed	

Table 4.4 shows the potential areas for overlap between the three projects and identifies how service co-ordination will be managed.

Table 4.4: MICM, MAATIC and BE Hub – mitigating service overlaps

Overlap	Projects involved	How duplication of service provision will be managed
Accessible R&D facilities	- MAATIC - MICM	There will be a clear pathway between the 2 facilities to ensure that as and when students require access to more advanced equipment (such as for a dissertation) they are able to use items available in MICM. MAATIC and MICM will use the monthly meetings to liaise on equipment provision to avoid duplication and redundancy between the two centres. They will also consider provision elsewhere in Scotland and the UK as alternatives to in-house provision. As a general principle, equipment provision at MAATIC will be aimed at general skills development for students while MICM will focus on specific, higher specification provision for businesses.
Incubation space	- BE Hub - MAATIC - MICM	The projects will use these spaces to target different sectors. - *BE Hub:* Any micro/small business not directly related to MAATIC/MICM or if there is no available space at one of these sites. - *MAATIC:* Aviation, digital/tech businesses and spin offs. - *MICM:* Local manufacturing and engineering businesses including start-ups and established businesses. Will likely

Overlap	Projects involved	How duplication of service provision will be managed
		be focused on short term, flexible use on a project basis, predominantly to give existing businesses space to progress product or process development away from 'day job' activity. The facility will also have grow-on space for expansion of projects/businesses developed through other incubators.
Teaching / training	- BE Hub - MAATIC	The main difference between the 2 projects is the sectors being targeted. BE Hub will focus on business skills, whereas MAATIC's will be aerospace skills, digital / immersive technologies and skills for safety critical environments.

HIE and UHI Moray and their associated project teams have mutually agreed that, *"irrespective of where a student, individual or business commences their interaction with the BE Hub, MAATIC and MICM ecosystem, staff supporting them will be trained to give advice that ensures the optimum route for progression is set out, even if that is not within the facility the journey started off in. This is critical to ensure the best quality pathways are created and that the strongest outcomes are generated for users."*

To achieve this, the following steps are proposed:

- Monthly meetings involving the management teams of the facilities. These will seek to:
  - Identify early any strategic changes in the service offers of each facility, with the facilities being consultees as part of the change control /approval process for any service variations within UHI and HIE so there is an ability to quantify the positive or negative impact on specific facilities with an associated proportionate management plan to be put in place.
  - Review operational activity, gaining insight on the pathway journeys of students, individuals and businesses that will generate learning on how these can become more efficient and user focused.
  - Ensure visibility around planned future temporary activity such as showcases or exhibitions, with the aim that agreement is reached regarding how the three facilities will support these to maximise their impact.
  - Jointly assess new or replacement equipment requirements for the facilities with a view to preventing duplication and to ensure value for money.
- Regular (through the annual employee performance review process or equivalent) development plans to be put in place for key groups of staff to ensure insight gained on pathway journeys drives improved training for staff and continual improvement in service provision.

The MICM customer journey

Figure 4.2 on the following page shows the MICM customer journey.

MICM's services were described in Table 4.2 and include a range of tenancy options (incubator space, desk space, and grow-on space), but at the heart of MICM's objectives is engagement with indigenous manufacturing SMEs in Moray on product and process innovation as well as supporting net zero transition in their operations.

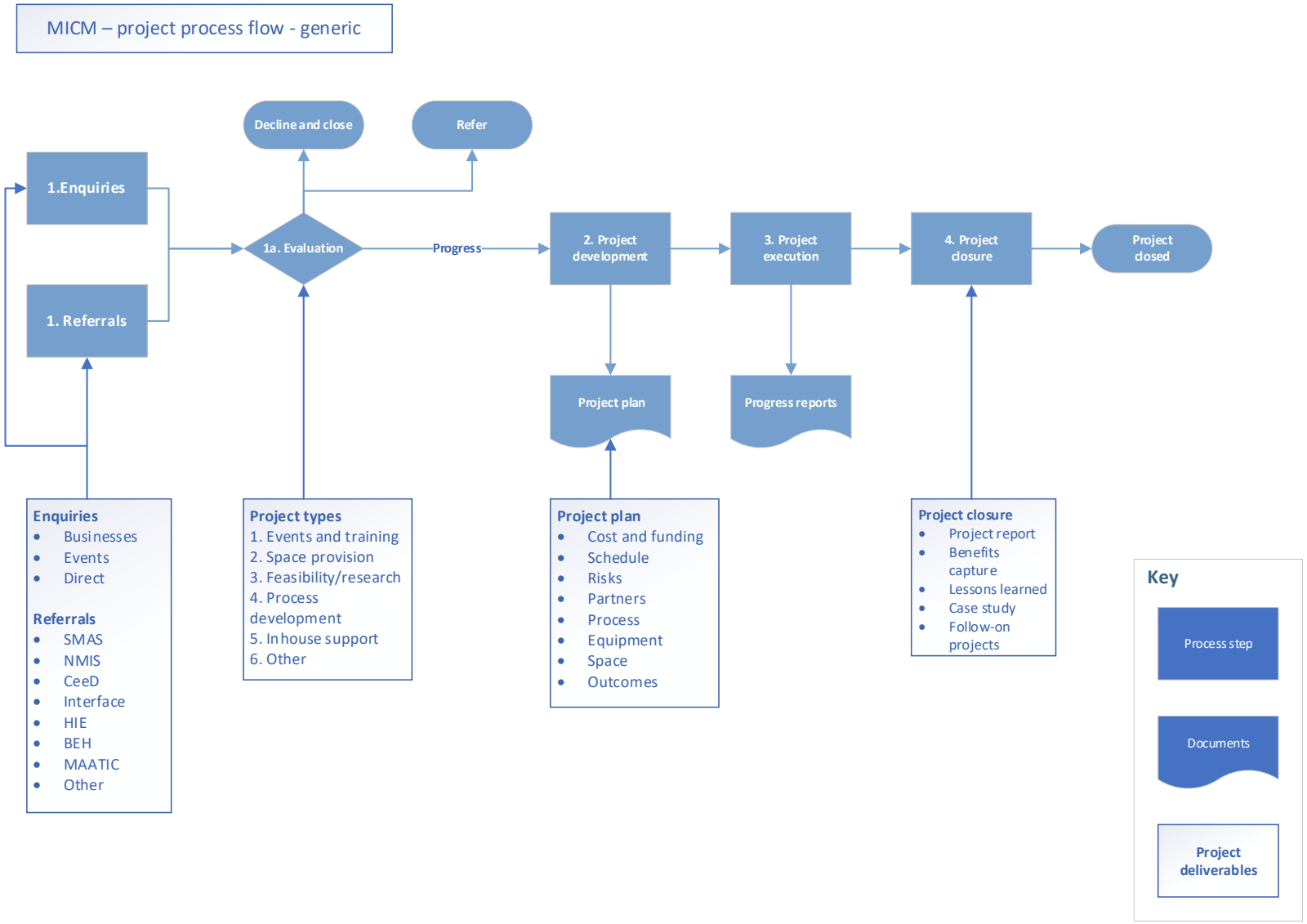
As Figure 4.2 demonstrates, it is anticipated that the engagement process for many of these services will be by raising MICM's profile with these potential service users through events, referrals and direct engagement. MICM will have a well organised programme of relevant, targeted events which will be free for SMEs to attend. These will be organised in close coordination with other service providers (e.g. CeeD and NMIS). MICM will follow-up with further free diagnostic and advice services, to understand business operations, establish their current baseline in product and process innovation and net zero transition terms. From there, an action plan can be developed, quantifying key issues and highlighting specific improvement projects which will demonstrably bring benefits to the bottom line.

In some cases MICM will then actively support engagement with relevant innovation service providers (e.g. NMIS, CeeD or Innovation Centres) to meet specific needs. In other cases, MICM itself will provide more in-depth advisory and support services to the SME, either on a specific project or to support them in working up applications for funding from other providers. Use cases showing how MICM will engage with micro, small and medium SMEs in these paid for services – in a differentiated way from the support available from other providers – are provided in Table 4.5.

Table 4.5: Use cases showing differentiated MICM paid-for services

Business profile	The need	Barriers to innovation	Likely paid for services
Micro	**Getting started** – taking the first steps on product and process innovation	New to innovation Time Skills Infrastructure	Small equipment hire Project development Project management Project delivery
Small	**Making the leap** – moving from improvement to automation	Sceptical on value Time Skills Infrastructure	Project development Project management Project delivery Development space Demonstration space
Medium/Large	**Staying on course** – continuing the innovation journey	Time Advanced skills Need for justification/business cases	Feasibility projects Project support Longer term development/pilot space

Figure 4.2: MICM customer journey



Market rates will be adopted and it is intended that MICM will develop a network of third party providers to work collaboratively with SMEs, thus mitigating concerns about crowding out. If MICM is successful in meeting its objectives, the size of the local market for manufacturing innovation advisory services can be expected to increase as SMEs become less risk averse over time.

However, in the short term, as the Strategic Case highlighted, levels of risk aversion are high and it will take time and concerted effort to stimulate demand. Nevertheless, the business survey showed quite clearly that there is both an underlying need and clearly expressed demand for services of the kind that MICM will offer.

The revenue model which forms part of the Financial Case makes the following assumptions about the build-up of paid-for services during MICM's initial operation (Table 4.6). Enquiries to HIE's Moray office demonstrate latent demand for a MICM-type service where hands-on advisory support forms part of the service which would support levels of service activity being forecast.

Table 4.6: Build up of MICM paid-for services

Service user SME type	Full operating target	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Medium	5 projects pa @ £10,000	0	12,500	20,000	30,000	35,000	50,000
Small	10 projects pa @ £5,000	0	12,500	20,000	30,000	35,000	50,000
Micro	15 projects pa @ £2,500	0	9,375	15,000	22,500	26,250	37,500
Total revenue from paid-for services		**0**	**34,375**	**55,000**	**82,500**	**96,250**	**137,500**

Treatment of VAT

For the purposes of the financial modelling presented in this FBC, Value Added Tax is not included. It is expected that VAT will be levied at the prevailing rate on all paid-for services (including rents and project support) and that all VAT will be fully reclaimable.

Potential for Risk Transfer

Table 4.7 provides an assessment of how the associated risks are likely to be apportioned between the public and private sectors.

The nature of the MICM project means that even though capital works will be procured from the private sector (see Procurement), most risks will remain with the public sector, at least until the project is self-sustaining. However, it is anticipated that some of the construction and development risk will be shared with the private sector as part of the procurement of the capital works. As regards revenue service delivery, even under an outsourced model, it is anticipated that the risk allocation would remain with the public sector, at least until the project is self-sustaining, because of the nature of the services being contracted.

Table 4.7: MICM Option 2 (Preferred option) – potential risk allocation

Risk Category	Potential allocation		
	Public (HIE)	Private (contractor)	Shared
1. Design risk	✓		
2. Construction and development risk			✓
3. Transition and implementation risk	✓		
4. Availability and performance risk	✓		
5. Operating risk	✓		
6. Variability of revenue risks	✓		
7. Termination risks	✓		
8. Technology and obsolescence risks	✓		
9. Control risks	✓		
10. Residual value risks	✓		
11. Financing risks	✓		
12. Legislative risks	✓		
13. Other project risks	✓		

Capital risks are assessed as low due to HIE's long experience of property development, its ownership of Units 9 and 10 and of the land adjacent to Unit 10. Risks are further mitigated by the fact that Enterprise Park Forres already has outline planning consent for these activities.

Risks in revenue service delivery will be mitigated through clear contractual arrangements, including KPIs linked to the service specification.

Procurement strategy and implementation timescales

Capital works

HIE will lead the project and will design and procure the refurbishment of Unit 9 and of the subsequent phase of grow-on units (Unit 10 and new build) using its existing procurement frameworks. Procurement will be subject to the contract value following detailed design but is likely to take the form of either a Quick Quote (up to £2.0M), or through a Sub-FTS procurement process (previously a Competitive Open Tender, now a Sub-Find a Tender Service). The procurement of the grow-on Units will either be via a Sub-FTS or FTS procurement depending on the contract value.

It is anticipated that, subject to FBC approval, tenders would be returned for the MICM Hub phase in early 2024, enabling works to commence prior to the end of the 2023/24 financial year with completion within 6-9 months. As discussed above, detailed design and tendering of the MICM Grow-on space will be designed and tendered in 2026/27.

Revenue services

HIE has undertaken a review of the issues and options associated with the delivery of MICM services which is summarised in Table 4.8 on the following page. Delivery options which have been considered range from HIE taking on direct delivery of the service through to a standalone entity.

Table 4.8: MICM Service Delivery – key issues and options framework

TIMESCALES:	**SHORT-TERM (1-5 YEARS)**			**POSSIBLE MEDIUM/LONGER TERM (5+ YEARS)**			
GOVERNANCE:	**HIE Growth Deal Programme governance arrangements**						
	Moray Growth Deal Programme governance arrangements						
	MICM SRO + Project Board (responsibilities increase with more formal project structures)						
PROJECT STRUCTURE:	**Direct**	**Projectised**		**Subsidiary**		**Joint Venture**	
DELIVERY OPTIONS:	Direct – staff added to HIE's headcount	Project staff recruited and managed by HIE + all HIE costs projectised	Contract for services + other HIE costs projectised	Direct (subsidiary employees)	Contract for services	Direct (JV employees)	Contract for services
PROPERTY ASSETS:	Retained by HIE	Retained by HIE	Retained by HIE	Transferred to subsidiary or retained by HIE		Transferred to JV or retained by HIE	
CONCLUSION:	**REJECTED** Headcount and access to skills	**UNDER EVALUATION** Project team currently appraising these options		**FUTURE DECISION** Informed by interim evaluation and governance reviews once project underway			
KEY CONSIDERATIONS:	• Alignment with HIE's current operating model • Access to skills to ensure timely, effective delivery • Value for money • VAT and tax issues (implications for VAT charging and recovery (including on construction costs) of different options) • Governance burden • Legal / technical / accounting burden						

It will not be possible for HIE to directly deliver the project from existing headcount or through recruitment of new HIE permanent staff. The proposal is that the service will be delivered initially as a HIE project, allowing it to have its own cost centre within HIE. In terms of staffing and the delivery of the range of services set out at Table 4.2 above, HIE is currently assessing the most appropriate way forward, taking into account the range of considerations set out in Table 4.8, including value for money as well as technical issues around VAT and tax treatment. Of the two remaining options the first is the recruitment on fixed term contracts of project staff and the alternative is to outsource delivery through a Contract for Services.

In the event that a Contract for Services is pursued, then the procurement process will be determined by contract length (see below) and contract value but would likely take the form of a Sub-FTS or FTS procurement process as described above.

The stepping up of revenue services will be phased, so that a MICM Director can be in place to launch MICM in spring 2024, moving to full operation as the capital works on the MICM Hub reach completion later in 2024.

Under either delivery option, contract management will sit with HIE. The Management Case discusses project governance arrangements in more detail.

By 2029/30, two years out from the end of the Growth Deal period, HIE expects to have developed an approach for the creation of MICM as a standalone entity and HIE's exit from the project (see Management Case). Any decisions around service delivery will be determined by the agreed governance pathway at that stage.

Proposed Charging Mechanisms

Capital works

Payment for all design, construction and development contracts will be made by HIE according to a pre-agreed payment schedule. This schedule will form part of the contract (see below) with the Most Economically Advantageous Tenderer (MEAT) selected through the procurement process described above.

Revenue services

If MICM is delivered by a dedicated, fixed-term project team, then HIE will charge for all MICM paid services and all HIE costs incurred in the delivery of the MICM project would be projectised.

Under an outsourced Contract for Services, payment to the Service Contractor would be made according to a pre-agreed payment schedule as negotiated with the successful tenderer.

In that scenario, the Service Contractor would be responsible for delivering the MICM project to an agreed annual budget and would also be responsible for all income recovery from incubator spaces, desk spaces and meeting room hire at the MICM Hub as well as rents from the MICM Grow-on space. The Service Contractor would also be responsible for the delivery of other MICM paid services to SMEs.

Irrespective of the delivery solution, the charges for all MICM services to end users will be at market rates. No subsidy will be provided to SMEs through any of MICM's charging activities.

Proposed Contract Lengths

Capital works

It is anticipated that there will be two contracts for capital works:

- the creation of the MICM Hub through the refit of Unit 9 will take place first. Detailed design work has now commenced, commissioned by HIE through its Lot 3 Building Surveying Framework. This includes detailed design, planning services to building warrant stage and provision of a tender pack for the works. The procurement process for these works will commence as soon as possible following approval to the FBC. On this basis, it is assumed that the construction contract will span two financial years (2023/24 to 2024/25). An action plan with a programme of key dates is provided in the Management Case (Section 6.1.3).
- the creation of MICM Grow-on space through the reconfiguration of Unit 10 and the creation of a linked new building on the same plot is programmed to take place in 2026/27. The current programme assumes that the works will span two financial years, 2026/27 and 2027/28.

Revenue services

If fixed-term project staff are recruited to deliver MICM, then these would be for a minimum of 3 years with the potential to extend by a further year.

If the services are outsourced, then the contract length will also be for an initial term of 3 years, with potential to extend by a further 1 year.

An interim evaluation will take place during 2026/27, in good time to assess the performance of the project and its delivery solution during the initial 3 year delivery period, prior to a decision about extending to a fourth year. The interim evaluation will also inform any update to the specification of requirements for revenue services for a second 3-4 year period.

Proposed Key Contractual Clauses

Capital works

All capital works will be contracted using a NEC4 Engineering and Construction Contract June 2017 (with amendments January 2019 and October 2020), the template for which can be found in Appendix 8. The key clauses include the following:

- Scope
- Site information
- Contractor's main responsibilities
- Time (including Start Date and Completion Date)

- Quality management
- Payment
- Compensation events
- Liabilities and insurance
- Resolving and avoiding disputes
- Price, payment and tax
- Retention
- Low performance damages

Revenue services

If revenue services are contracted out, then this would be via a Management Services contract. These contracts are bespoke to each service and a draft contract would be prepared alongside the Specification of Requirements. Based on HIE's experience of managing a similar contract at Horizon Scotland (which includes management of incubator space), the key contractual clauses could be expected to include:

- Term
- Scope
- HIE's obligations
- The Services and Performance Management
- Manner of Carrying Out the Services
- Standard of Work
- Key Personnel
- Contractor's Staff
- Inspection of Premises
- License to Occupy Authority's Premises
- Authority Property
- Sub-contracting for the delivery of the Services
- Offers of Employment
- Price
- Payment and Tax
- Statutory Obligations and Regulations
- Protection of Information
- Control of the Agreement, including variation and remedies in the event of inadequate performance
- Liabilities and insurances

- Default, disruption and termination

Any Management Services Contract would also include additional schedules covering Intellectual Property Rights, Staff Information, Details of Processing of Authority Personal Data and Key Performance Indicators.

Personnel implications

TUPE – Transfer of Undertakings (Protection of Employment) Regulations 1981 – will not apply to this investment. No existing staff are involved. The MICM project team will either be recruited as fixed term project staff, or delivery will be outsourced to through a Contract for Services where the contract will ensure that there are no TUPE liabilities for HIE.

5. The Financial Case

Project expenditure and income

Capital expenditure and funding sources

The works associated with the preferred option will have a capital cost of £5.61 million (including contingency and inflation allowance). This is lower than the £6.89 million anticipated at OBC stage due to the repurposing of existing premises.

Based on the funding shares established at OBC stage, of the new total capex requirement Moray Growth Deal funding is anticipated to provide just over £3m (£2.44m from UK Government and £0.61m from the Scottish Government) with HIE investing £2.56m (net) to cover the balance.

Table 5.1: Option 2 (preferred option) – capital funding requirement and funding strategy, including inflation

	OBC capital funding strategy	Anticipated FBC capital funding strategy
Highlands and Islands Enterprise	3,142,000	2,557,010
Scottish Government	750,000	610,362
UK Government	3,000,000	2,441,448
Total	**6,892,000**	**5,608,820**

Table 5.2 on the following page shows the capital expenditure profile for Option 2 in more detail. For FBC purposes, cost estimates have been prepared by Torrance Partnership on behalf of HIE, based on briefings by the project team on the nature of the work that will be required for both elements of the project. These were detailed in the Commercial Case.

Table 5.2 also shows that in addition to HIE's £2.56m contribution to the cost of the works, the capital model assumes that HIE will provide grant-in-aid funding (currently estimated at £550,000) to a new MICM entity at the end of the Growth Deal period to enable the entity to acquire the MICM Hub and Grow-on assets from HIE. This is consistent with HIE's exit strategy for the project which is set out in the Management Case. This sum does not form part of the capital funding ask at this stage but is shown for completeness. Any decisions on future asset transfer to a new entity will be made with the explicit agreement of the Moray Growth Deal and Scottish Government and UK Government stakeholders.

Revenue income and expenditure and funding sources

At OBC stage, MICM was forecast to become self-sustaining by 2033/34, around two years after the end of the Growth Deal programme in December 2031. The OBC forecast was that in addition to full draw-down of the Scottish Government's revenue

grant funding of £1.25m, HIE would need to make a further revenue contribution of £125,000.

Table 5.2: Capital cost and funding requirements

Item	Assumptions	Total	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
Project development costs (OBC, FBC incl. cost estimates)	Costs to tender stage not included below	**134,000**	134,000							
Unit 9 refit and net zero improvements	TP 23.805 V2, incl. prelims, 5% works contingency, fees and planning costs + further 10% contingency to reflect design immaturity	**1,597,344**	239,602	1,357,742						
Equipment (incl. office equipment)		**750,000**		750,000						
Net zero demonstration	Based on CENSIS proposal	**50,000**		50,000						
Unit 10 refit (3 x grow-on units, 543 sq.m GIA) and additional new build grow on unit (250 sq.m GIA)	TP 23.805 V2, incl. prelims, contingency, fees and planning costs	**2,365,611**				1,537,647	827,964			
Total public sector capital cost, excluding inflation		**4,896,955**	**373,602**	**2,157,742**	**0**	**1,537,647**	**827,964**			
Inflation allowance (per annum)	Based on Torrance Partnership advice of 5-7% pa		1.00	1.06	1.06	1.06	1.06			
Inflation allowance (cumulative)			1.00	1.06	1.12	1.19	1.26			
Total public sector capital cost, including inflation allowance		**5,608,820**	**444,966**	**2,287,207**	**0**	**1,831,362**	**1,045,285**			
Plus HIE investment to enable new MICM Entity to acquire Units 9 and expanded Unit 10 from HIE in Year 7 (2030/31)	*Subject to discussions on governance and valuation of assets at that time*	***550,000***								*550,000*
Minus Capital receipt to HIE from sale of Units 9 and 10 to MICM	*Subject to discussions on governance and valuation of assets at that time*	***550,000***								*550,000*
Net public sector capital cost (2023/24 prices, excluding inflation)		**4,896,955**	**373,602**	**2,157,742**	**0**	**1,537,647**	**827,964**	**0**	**0**	**0**
Net public sector capital cost (including inflation)	**Capital funding ask now (including inflation)**	**5,608,820**	**444,966**	**2,287,207**	**0**	**1,831,362**	**1,045,285**	**0**	**0**	**0**

Following further development of the operating and revenue model during the FBC process, MICM is now forecast to become financially sustainable during 2031/32, within ten years of opening. Until its revenue-generating capacity comes fully on stream, it is forecast to require revenue deficit funding totalling £1.25m to December 2031 (from the Scottish Government's £1.25m revenue contribution to the project). In the event that the deficit position is higher or extends for longer, HIE will fund any additional revenue deficit. Table 5.3 shows an income and expenditure profile for the project from January 2024 to December 2031 when the Growth Deal ends, showing how, as income builds up, MICM is expected to become self-sustaining by the end of the period.

Table 5.3: Option 2 (preferred option) – revenue income and expenditure including inflation

Growth Deal Year	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**To Dec 31**
MICM year	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	
Financial year	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**
Income	0	21,975	122,526	192,341	262,470	316,548	394,260	441,231	452,262
Expenditure	47,388	328,261	395,946	443,965	410,894	421,167	491,361	442,488	432,655
Expenditure minus income (surplus is negative)	**47,388**	**309,173**	**276,423**	**254,703**	**151,580**	**107,853**	**100,416**	**4,655**	**-19,607**

Table 5.4 shows the cumulative deficit position over the period to December 2031.

Table 5.4: Option 2 (preferred option) – revenue income and expenditure including inflation

Financial Year	**Expenditure minus income in year (negative is surplus)**	**Cumulative deficit**
2023/24	47,388	47,388
2024/25	309,173	356,561
2025/26	276,423	632,984
2026/27	254,703	887,687
2027/28	151,580	1,039,267
2028/29	107,853	1,147,119
2029/30	100,416	1,247,535
2030/31	4,655	1,252,190
Q1-Q3 2031/32 (i.e. to December 2031)	*-14,705*	*1,237,485*
2031/32 (full year)	-19,607	1,232,584
2032/33	-20,097	1,212,487

Table 5.5 shows the revenue model to the end of the Growth Deal period in detail.

Table 5.5: MICM revenue model, 2023/24 to 2031/32

Category	Item	Assumptions	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
EXPENDITURE											
EPF Service Charges	For Unit 9 from Day 1, and Unit 10 when this becomes part of MICM operation	Unit 9: 25% in year 1, then 100% thereafter; Unit 10: 100% from Year 3 onwards	317	1,269	1,269	2,230	2,230	2,230	2,230	2,230	2,230
Staffing (incl. on costs)	Project Director (1 FTE) - Salary	Contract for services	18,750	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
	Project Director - On-costs	On-costs assumed to be 21%	3,938	15,750	15,750	15,750	15,750	15,750	15,750	15,750	15,750
	Centre Manager (1 FTE) - Salary	Contract for services	0	33,750	45,000	45,000	45,000	45,000	45,000	45,000	45,000
	Centre Manager - On-costs	On-costs assumed to be 21%	0	7,088	9,450	9,450	9,450	9,450	9,450	9,450	9,450
	Administrator (20 hours) - salary	Contract for services / assumed Real Living Wage	0	8,502	11,336	11,336	11,336	11,336	11,336	11,336	11,336
	Administrator (part-time) - on-costs	On-costs assumed to be 21%	0	1,785	2,381	2,381	2,381	2,381	2,381	2,381	2,381
Marketing	Branding and ongoing promotion		5,000	20,000	20,000	20,000	15,000	15,000	15,000	15,000	15,000
	Website (ongoing)			15,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Other overheads	Rates, Water & Waste	Based on G&S Unit 9 data	10,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
	Broadband /Telephone/Internet	HIE based on Horizon Scotland	2,250	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
	Electricity	Latest assumption is £2,500 pm (1.5x Horizon Scotland) (checking also with AMC Fort William)	0	15,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
	Security & Fire	HIE based on Horizon Scotland	0	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
	Cleaning	HIE based on Horizon Scotland	0	2,250	9,000	9,000	9,000	9,000	9,000	9,000	9,000
	Event costs (incl. catering and hire)	Assumption	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
	Internal maintenance - unit 9	HIE assumption	0	625	2,500	2,500	2,500	2,500	2,500	2,500	2,500
	External maintenance - unit 9	HIE assumption	625	1,250	2,500	2,500	2,500	2,500	2,500	2,500	2,500
	Insurance		250	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Category	Item	Assumptions	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
	Legal fees			3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Other professional fees	e.g. equipment, compliance		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Office Equipment purchase			500	500	500	500	500	500	500	500
	Staff Training		500	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Staff travel expenses		1,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
	IT support		300	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
	Printing, postage and stationery		150	600	600	600	600	600	600	600	600
	Bank charges			840	840	840	840	840	840	840	840
	Other service stand-up costs			12,500	30,000	30,000	30,000	30,000	30,000	30,000	
Governance	SLA with HIE	Assumed £7.5k (in 2023/24 prices) from Year 11									7,500
	Accounting and auditing	Assumption (from Year 11), say £5k									5,000
Monitoring and Evaluation	Ongoing monitoring (annual business survey)		0	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Interim evaluation (formative, after 2 years)		0	0	0	30,000	0	0	0	0	0
	Final (impact) evaluation (after 7 years)		0	0	0	0	0	0	45,000	0	0
Total revenue cost before contingency			43,080	286,709	332,125	363,087	328,087	328,087	373,087	328,087	310,587
Contingency (10%)			4,308	28,671	33,213	36,309	32,809	32,809	37,309	32,809	31,059
Sub-total, public sector revenue cost excuding inflation			**47,388**	**315,380**	**365,338**	**399,396**	**360,896**	**360,896**	**410,396**	**360,896**	**341,646**
Cumulative inflation allowance from 2024/25 onwards		Assumes 5% in 2024/5, 4% for 2025/6 then 2.5% thereafter	1.00	1.05	1.09	1.12	1.15	1.18	1.21	1.24	1.27
Total public sector revenue cost, including inflation allowance			**47,388**	**331,149**	**398,949**	**447,044**	**414,049**	**424,401**	**494,676**	**445,886**	**432,655**
INCOME											
MICM Hub Incubation space	Unit 1 (39.06 sq. m / 420 sq. ft) (GF rear existing)	12 mths license, 1 mth either side Assume £15 per sq. ft pa (all-inclusive (rates/water/cleaning/broadband) except for sub-metered electricity)	0	4,725	6,300	6,300	6,300	6,300	6,300	6,300	6,300
	Unit 2 (59.45 sq. m / 639 sq. ft) (GF rear existing)	" "	0	7,189	9,585	9,585	9,585	9,585	9,585	9,585	9,585

Category	Item	Assumptions	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
	Unit 3 (40.41 sq. m / 435 sq. ft) (GF rear existing)	" "	0	0	6,525	6,525	6,525	6,525	6,525	6,525	6,525
	Unit 4 (68 sq. m / 731 sq. ft) (GF front new)	" "	0	0	5,483	10,965	10,965	10,965	10,965	10,965	10,965
	Unit 5 (68 sq. m / 731 sq. ft) (GF front new)	" "	0	0	0	10,965	10,965	10,965	10,965	10,965	10,965
	Unit 6 (62.68 sq. m / 674 sq. ft) (FF rear new)	Treat as void - utilisation proxy	0	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
	Recovery of sub-metred electricity	50% of costs subject to incubator occupancy		2,015	9,436	15,000	15,000	15,000	15,000	15,000	15,000
MICM Hub Desks	Desk 1 (innovation provider - TBC)	£2,500 pa	0	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
	Desk 2 (innovation provider - TBC)	£2,500 pa	0	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
	Desk 3 (innovation provider - TBC)	£2,500 pa	0	0	2,500	2,500	2,500	2,500	2,500	2,500	2,500
	Desk 4 (Private Sector Project / Hot Desk)	£4,000 pa	0	0	4,000	4,000	4,000	4,000	4,000	4,000	4,000
	Desk 5 (Private Sector Project / Hot Desk)	£4,000 pa	0	0	0	4,000	4,000	4,000	4,000	4,000	4,000
	Desk 6 (ASSUME VOID)	Treat as void - utilisation proxy	0	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
MICM Hub Meeting Room	Income from hire of meeting room	£500/month (TBC)	0	2,000	4,000	6,000	6,000	6,000	6,000	6,000	6,000
MICM Grow-on space	Unit 1 (152 sq.m / 1635 sq ft)	Assume £9psf pa, based on a 2-3 year lease	0	0	0	0	14,715	14,715	14,715	14,715	14,715
	Unit 2 (154 sq.m / 1,657 sq. ft)	Assume £9psf pa, based on a 2-3 year lease	0	0	0	0	0	14,913	14,913	14,913	14,913
	Unit 3 (154 sq.m / 1,657 sq. ft)	Assume £9psf pa, based on a 2-3 year lease	0	0	0	0	0	0	14,913	14,913	14,913
	Unit 4 (250 sq. m / 2,690 sq ft)	Assume £9psf pa, based on a 2-3 year lease	0	0	0	0	0	0	0	24,210	24,210
	Unit 1-3 core area (83 sq. m / 893 sq. ft) cost recovery / service charge	Assume £9psf pa, based on a 2-3 year lease					1,720	3,464	5,207	8,037	8,037
MICM Events	Events income from co-production / sponsorships	Assume one a month with £1k sponsorship per event once MICM fully established	0	0	5,000	6,000	9,000	9,000	9,000	12,000	12,000
Paid-for	Project income from	5 projects per annum at	0	0	12,500	20,000	30,000	35,000	50,000	50,000	50,000

Category	Item	Assumptions	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
services	productivity/net zero service delivery - medium SMEs @ £15,000 pa	full operation									
	Project income from productivity/net zero service delivery - small SMEs @ £7,500 pa	10 projects per annum at full operation	0	0	12,500	20,000	30,000	35,000	50,000	50,000	50,000
	Project income from productivity/net zero service delivery - micro SMEs @ £2,500 pa	15 projects per annum at full operation	0	0	9,375	15,000	22,500	26,250	37,500	37,500	37,500
Misc income	Future project-related income streams as MICM reaches full potential to support delivery of manufacturing innovation and net zero activity (e.g. Scope 3 emissions reduction)	e.g. from OEMs of manufacturing / process control / robotics equipment	0	0	20,000	30,000	40,000	50,000	50,000	50,000	50,000
Total income from delivery, constant 2023/24prices, excluding inflation			**0**	**20,929**	**112,203**	**171,840**	**228,775**	**269,182**	**327,088**	**357,128**	**357,128**
Cumulative inflation allowance on income from 2024/25 onwards		Assumes 5% in 2024/5, 3% for 2025/6 then 2.5% thereafter	1.00	1.05	1.09	1.12	1.15	1.18	1.21	1.24	1.27
Total income from delivery, including inflation			**0**	**21,975**	**122,526**	**192,341**	**262,470**	**316,548**	**394,260**	**441,231**	**452,262**
Net surplus/deficit pa 2023/24 prices (excluding inflation)		**Negative is surplus of income over expenditure**	47,388	294,451	253,135	227,556	132,120	91,714	83,308	3,768	-15,482
Net surplus/deficit pa including inflation		**Negative is surplus of income over expenditure**	47,388	309,173	276,423	254,703	151,580	107,853	100,416	4,655	-19,607

As discussed in the Commercial Case, there are clear interdependencies between the capital model (which creates lettable assets to generate an income stream) and revenue funding to help stand the project up in its initial phase, while income streams develop to their full potential.

Importance sources of income for MICM include the following:

- Rental income from incubator units in the MICM Hub and the MICM Grow-on units
- Rent of other desk spaces by service providers and the private sector in the MICM Hub
- Paid-for services to manufacturing SMEs.

As the revenue model shows, these will take time to develop. An allowance has also been made for voids in the incubator units and desk spaces.

The detailed expenditure and income lines in the model are in 2023/24 prices. An inflation allowance has then been added to assess the overall annual performance in income and expenditure terms. These inflation allowances are 5% for 2024/25, 3% for 2025/26 and 2.5% thereafter.

Overall affordability

The tables above demonstrate the financial sustainability of the proposed project.

The capital funding requirements from Scottish Government and UK Government through the Moray Growth Deal are lower than forecast at OBC stage. The current forecast is that the revenue grant of £1.25m will still need to be drawn down in full.

Approval to HIE's contribution to MICM will be sought at HIE's Board meeting on 31st October.

Impact of sensitivity testing on revenue model

The same revenue sensitivity tests which were used to assess the resilience of the project in Value for Money terms have been applied to the revenue model in cash terms (with inflation) in the Financial Case. The sensitivity tests are:

- **Scenario 1: Impaired financial performance:** Incubator and grow-on space rents and paid-for service income are assumed to be 10% lower than forecast from day 1
- **Scenario 2: Reasonable worst-case scenario:** Total Incubator and grow-on space rents and paid-for service income are assumed to be 20% lower than forecast from day 1.

The base case financial revenue performance of Option 2 is compared with the results of these two sensitivity tests in Table 5.6 on the following page.

Table 5.6: Sensitivity analysis of Option 2 revenue model: revenue deficit (surplus) including inflation (2023/24 to 2032/33)

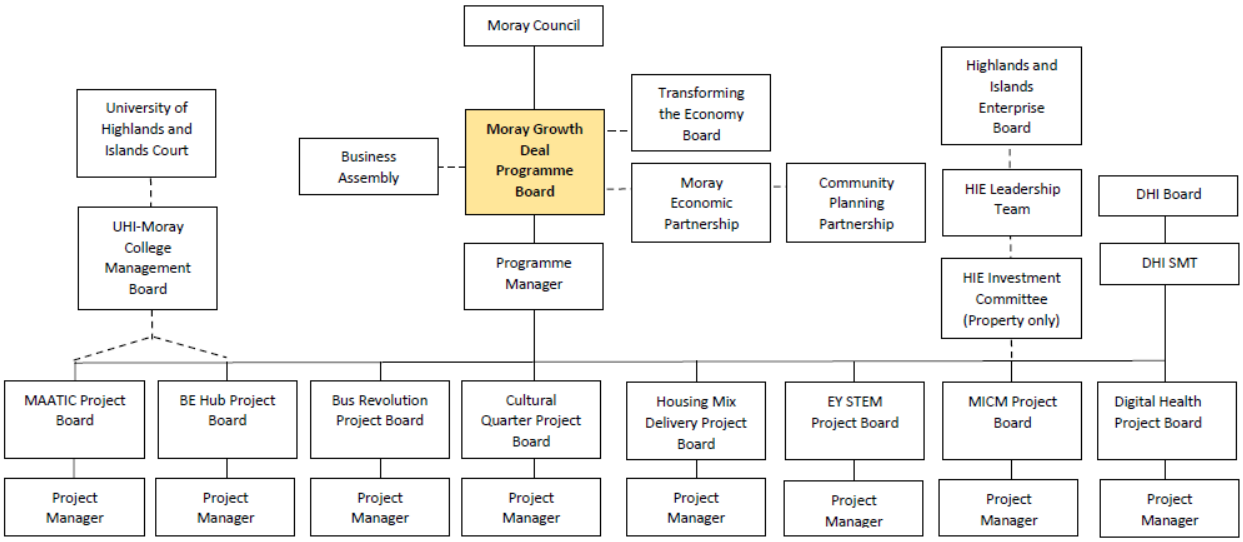
Financial Year	Base case expenditure minus income in year (negative is surplus)	Sensitivity Scenario 1	Sensitivity Scenario 2
2023/24	47,388	47,388	47,388
2024/25	309,173	310,424	311,675
2025/26	276,423	283,223	290,022
2026/27	254,703	265,822	276,941
2027/28	151,580	168,017	184,455
2028/29	107,853	128,277	148,701
2029/30	100,416	128,331	156,246
2030/31	4,655	36,608	68,562
2031/32	-19,607	13,146	45,898
2032/33	-20,097	13,474	47,045

The Economic Case demonstrated that the project would remain good value for money under both scenarios – subject to funding. Reviewing this again in the Financial Case through the specific lens of the revenue model demonstrates that the revenue position of MICM is finely balanced, relying heavily on successful letting and paid-for services delivery to break-even by year 10. This is prominent in the key performance indicators (KPIs) presented in the Management Case.

6. The Management Case

Programme management arrangements

The project is an integral part of the Moray Growth Deal (MGD) programme, which comprises a portfolio of projects for the delivery of economic growth to the Moray region. The current MGD programme governance arrangements is shown below.



As discussed in the Commercial Case, HIE and UHI Moray have agreed that there will be monthly management team meetings between MICM, MAATIC and the BE Hub projects to provide oversight and co-ordination of all three innovation projects. This will help to ensure efficiency in their design and delivery and maximise the synergies from a highly co-ordinated delivery.

Project management arrangements

Project reporting structure

HIE as owner of the project will continue to report to the Moray Growth Deal Programme Board on project delivery on a regular basis, following agreed procedures which will also include output monitoring as required alongside capital and revenue funding claims.

HIE's MICM project team or service contractor (depending on the final service delivery solution) will, in turn, be charged with responsibility for reporting to the MICM Project Board on a regular basis with financial and output reporting on the project performance.

It is intended that the MICM Project Board will continue in its present form for the duration of the Growth Deal phase of MICM. Membership of the Project Board and its Terms of Reference will be formally reviewed and agreed on an annual basis.

Project roles and responsibilities

The Senior Responsible Owner for the project will continue to be the Area Manager for Moray at Highlands & Islands Enterprise. The SRO will continue to be supported by a project team comprising the Head of Regional Development in HIE's Moray Team, HIE's Property, Procurement and Facilities Management Teams.

HIE's Property Team will procure and have oversight of the MICM Hub design, tendering and capital works. HIE's Procurement Team will support that process as well as the procurement of the Contract for Services (should that be identified as the preferred delivery solution). HIE's Facilities Management Team will take over responsibility for hard maintenance of both the MICM Hub and MICM Grow-on space once they have been handed over by the contractors.

Project plan

A Project Plan for MICM is provided below, covering the initial period up to the MICM Hub and Service Contract becoming operational as well as showing the anticipated timing of the MICM Grow-on space. The plan focuses on the steps needed to reach practical completion of the build, as well as the specification of the Contract for Services which will be critical to benefits realisation in the longer term.

Table 6.1: Project Plan, incorporating a Benefits Realisation Plan

Action summary	Action detail	Owner	Deadline
1. STRATEGIC DIRECTION, GOVERNANCE AND MANAGEMENT			
1.1 Governance arrangements	Delivery continues through HIE and its established governance and management arrangements, including the MICM Project Board	SRO	Ongoing
	Subject to performance, and following the interim evaluation (see below) HIE and the MICM Project Board review governance arrangements with a view to MICM becoming a standalone entity by the end of the Growth Deal period	SRO	Ongoing from 2026/27
	Expected establishment of standalone entity	SRO	Prior to end of Growth Deal period
1.2 Strategic direction and key Gateways	MICM Project Board approve submission of FBC to MGD Programme Board	MICM Project Board	By 16th August 2023
	MGD Programme Board approve FBC	MGD Programme Board	25th August
	HIE approve project **(Gateway 3 local approval) with decision on preferred service delivery solution** at next available Board meeting	SRO	31st October 2023
	Approval of FBC by Scottish Government and UK Governments **(Gateway 3 national approval)**	SG/UKG	November 2023
	Finalise detailed KPIs once service delivery solution has been agreed	MICM Project Board	Autumn 2023
	MICM service solution - readiness for service **Gateway 4 review**	MICM Project Board	Spring 2024
2. CAPITAL WORKS DELIVERY			
2.1 MICM Hub Design	Finalise detailed design for capital works, through HIE-appointed design team	SRO (sign off by MICM Project Board)	November 2023 (MICM Hub) 2026/27 (MICM Grow-on space)
2.3 MICM Hub Planning	Secure Building Warrant for MICM Hub/Unit 9	HIE Property Team	December 2023
2.4 MICM Hub Procurement	Tender for capital works via agreed procurement mechanisms	HIE Property Team (sign-off by MICM Project Board, HIE, and MGD Board)	January 2024

Action summary	Action detail	Owner	Deadline
2.5 MICM Hub Reconfiguration	Complete capital works	HIE Property Team	By Autumn 2024
2.6 MICM Grow-on	Design, planning and procurement of MICM Grow-on space (subject to interim evaluation)	SRO	2026/27-2027/28
3. REVENUE SERVICE DELIVERY (TWO OPTIONS)			
3.1 Preferred service delivery solution	Decision on preferred service delivery solution	SRO	September 2023
Service delivery via fixed term Project Team within HIE			
3.A.2 Project initiation	Follow established HIE procedures to set MICM up as a project	SRO	February 2024
3.A.3 MICM Director recruitment	Prepare job and person specification for MICM Director (in first instance, other staff to follow later in 2024)	SRO	February 2024
3.A.4 MICM Delivery	Delivery of MICM services in line with FBC Commercial Case	SRO	Initial period to Q3 2027/28 (4 years)
Service delivery via outsourced Contract for Services			
3.B.1 Procurement of Contract for Services	Build on FBC Commercial Case to prepare scope and specification for Contract for Services, including soft market testing	SRO	November 2023
	Finalise Specification of Requirements for Contract for Services	MICM Project Board	December 2023
	Procurement process for Contract for Services	SRO	January 2024
	Contract award	MICM Project Board	April 2024
	Delivery of MICM services in line with FBC Commercial Case and final agreed specification	SRO	Initial contract 2024/25 to 2028/29 (initial 3+1 contract)
4. MONITORING AND EVALUATION			
3.1 Monitoring arrangements	Finalise KPIs	SRO	November 2023
	Ongoing performance monitoring to Project Board, MGD Programme Director and MGD Board (**Gateway 5 reviews**) in line with MGD reporting requirements	MICM Project Board	Ongoing, in line with MGD reporting requirements
3.2 Interim evaluation	An interim review and evaluation of the performance of the MICM Hub and MICM service, identifying what is working well and less well and informing a decision around future delivery **(Gateway 0 Strategic Assessment)**	MICM Project Board	2026/27 (commission 1st April 2026 and report by June 2026)
3.3 Impact evaluation	A follow-up evaluation focused on impacts and to review progress since the interim evaluation **(Gateway 0 Strategic Assessment)**	MICM Project Board	2029/30

Use of special advisors

Special advisors have been and will continue to be used in a timely and cost-effective manner in accordance with the Treasury Guidance.

During the FBC process Torrance Partnership have provided cost and procurement advice. Colin Warnock Associates (CWA) was commissioned to prepare the OBC and FBC. Graham and Sibbald (G&S) have been commissioned by HIE to undertake detailed design work on Unit 9, progressing planning to building warrant and tender pack. Their work also includes carbon assessments. Torrance Partnership will support the procurement and project management process on behalf of HIE's Property Team.

Beyond the project development stage, the MICM Project Board will both provide, and have access to, the special advisors as shown in Table 6.2 on the following page.

Table 6.2: MICM special advisors in the delivery phase

Project Board representatives	Type of Advisor
HIE	Subject Matter Expert
SMAS	Subject Matter Expert
NMIS	Subject Matter Expert
UHI	Subject Matter Expert
Scottish Government – Advanced Manufacturing Team	Subject Matter Expert
Private sector representatives	Users
Supported by	
MICM Project Team / Outsourced Service Contractor	Supplier
HIE Procurement, Property, Facilities, Finance, Subsidy, Legal Teams	Subject Matter Experts

Arrangements for change and contract management

HIE's Property and Procurement Teams will be directly responsible for procurement of the capital works. HIE's Property Team will then manage those contracts

HIE's Moray Area Team will work with HIE's Procurement Team to procure the Contract for Services for MICM. This work will include the specification of requirements as well as the arrangements for contract management.

Change control procedures for the MICM Project Board will be developed in close co-operation with the Moray Growth Deal Partnership to ensure that these fit with broader programme management and partner change control requirements.

Arrangements for benefits realisation

As project SRO, HIE's Moray Area Manager will have lead responsibility for Benefits Realisation. The initial Action Plan provided at Table 6.1 above identifies the key steps which are needed in the short term (between FBC and procurement) to further develop the project to maximise its potential to deliver the benefits identified in this FBC. It also identifies key milestones on the project's critical path for delivery. As with the risk register, the Action Plan is now regarded as a live document, owned by the SRO and will be regularly reviewed with the Project Board once it is established.

MICM will adopt the output delivery targets shown in Table 6.3. In addition, MICM will monitor outcomes for those busineses engaged receiving MICM advice or support in terms of their R&D expenditure, turnover, employment and productivity. The latter will not be expressed as formal targets as performance will vary according to the specific baseline, needs and opportunities in each business. However, it is essential that these data are recorded and regularly updated (in a GDPR-compliant manner, in line with HIE's existing output monitoring arrangements) to help MICM understand its progress and inform future impact evaluation activity.

Table 6.3: Output delivery targets for MICM

Output target	Data source / measurement	Cumulative target by 31st March 2025	Cumulative target by 31st March 2027	Cumulative target by December 2031
Number of MICM supported events delivered	MICM monitoring	12	40	80
Number of unique business attendees at MICM events	MICM monitoring	30	50	100
Number of unique businesses receiving innovation advice (up to 3 days)	MICM monitoring	5	40	75
Number of unique busineses receiving innovation project support (more than 3 days or paid-for service)	MICM monitoring	0	20	50
Number of new business start-ups	MICM monitoring	0	3	8
Number of inward investment jobs (FTEs) attracted	MICM monitoring	0	10	20
Number of businesses supported with net zero transition	MICM monitoring	5	30	80

Monitoring arrangements will include annual surveys of SMEs using MICM services as well as the wider manufacturing base. They will also include the specific outputs above as well as additional service delivery KPIs and requirements for monitoring in line with the Equalities Impact and Fairer Scotland Duty Impact Assessments provided at Appendix 9. Proposals for Evaluation are made below.

A draft set of KPIs is provided at Table 6.4. These will be refined to ensure alignment with the preferred revenue service delivery option.

Table 6.4: Draft KPIs to be developed in the Contract for Services for MICM

Broad KPI heading	Detailed measure to be developed and quantified in the contract
Website and promotion	MICM promotional strategy in place by June 2024 and website by September 2024 in time for MICM hard launch
Events	Minimum of 6 relevant, well-targeted and promoted events in 2024/25 and then minimum of 12 events per annum thereafter. KPIs will also be developed for response times, booking management and event feedback processes
Engagement with manufacturing SMEs on innovation and net zero	Advisory services (up to 3 days) provided to 5 unique businesses in 2024/25, 20 businesses in 2025/26, 40 businesses in 2026/27, 50 businesses in 2027/28, 60 businesses in 2028/29 and 75 businesses in 2029/30
Paid-for services with micro SMEs	Service delivery to commence no later than 2025/26 and build to 15 projects per annum by 2026/27 generating paid-for service income in line with revenue model
Paid-for services with small SMEs	Service delivery to commence no later than 2025/26 and build to 10 projects per annum by 2026/27 generating paid-for service income in line with revenue model
Paid-for services with medium sized SMEs	Service delivery to commence no later than 2025/26 and build to 5 projects per annum by 2026/27 generating paid-for service income in line with revenue model
Incubator unit occupancy	Minimum occupancy level of 80% by 2026/27 at target rents and strive for 100% occupancy

Grow-on unit occupancy	Occupancy of 1 Grow-on unit at target rent by 2027/28, 2 units by 2028/29, 3 units by 2029/30 and 4 units by 2030/31
Desk unit occupancy	Rental of 2 desk spaces at target rents by 2024/25, 4 by 2025/26 and minimum of 5 by 2026/27, striving for all 6 to be let at all times.
Meeting room hire	Promotion and management of meeting room hire to achieve monthly revenue target
Tenant management	Full range of KPIs to be developed, covering response times, inductions, leasing information, lease reviews
Customer satisfaction rate	80% of MICM services users satisfied or very satisfied with MICM services (on a five point scale of very dissatisfied, dissatisfied, neither/nor, satisfied, very satisfied). A KPI will also be included for customer complaints handling.
Managed Services	Full statutory compliance in respect of all managed services, e.g. Health & Safety, Fire & Environmental Regulations
Management of Service Contracts	A range of KPIs will be developed covering compliance with statutory requirements, reporting of repairs/defects, reviewing service contracts to ensure best value for money and accurate record keeping
Factoring services	A range of KPIs will be developed covering invoicing for tenants, desk spaces, meeting room hire and paid for services; for the effective operation of the MICM Bank Account; and for debt recovery
Reporting	A range of KPIs will be developed covering reporting arrangements (including for the KPIS above) to the SRO and to the MICM Project Board and the form and due dates for each

Arrangements for the carbon management process

Graham and Sibbald have prepared the high level capital and operational carbon assessments included in the FBC and will prepare a formal Whole Life Carbon Assessment at RIBA Stage 4 as part of the detailed design process. During the detailed design process, consideration will be given to the mitigation of **capital carbon** through the application of RICS and other best practice. A detailed assessment will also be made of the **operational carbon** performance of Unit 9, post-reconfiguration, as well as the grow-on space at Unit 10 and adjacent new build in due course.

Arrangements for risk management

A risk register for MICM is provided at Appendix 6. This is a live document owned by the SRO and will be reviewed at MICM Project Board meetings. Responsibilities for management of these risks are set out in the register.

Arrangements for post project evaluation

The revenue budget for the MICM project includes provision for the following:

- **Annual performance reporting**, which will include survey work amongst business beneficiaries, starting from 2024/25 (once MICM becomes operational);
- An **interim (formative) evaluation**, anticipated early in 2026/27, two years into the project. This wide-ranging review will look at project performance up to that point, identify what is working well and less well and make recommendations for adjustment to the project's direction. This evaluation will also make recommendations for future delivery. The interim evaluation will also inform the

design of any grow-on space, in terms of demonstrating a need for their provision at that time, and advising on matters such as unit size;

- An **impact evaluation**, anticipated in 2029/30, approximately five years into the project. This will include a formative element, looking back at how the project has responded to recommendations made in the interim evaluation, but will seek to establish a full quantitative assessment of the benefits of all of the various dimensions of the project, including its impact on indigenous manufacturing businesses, its impact on new manufacturing start-ups (via the incubator) and early evidence on their acceleration (through grow-on space) and its impact on inward investment. It is also expected that the 2029/30 evaluation will include a formative element supporting the review of governance arrangements including the feasibility of a standalone entity;
- Both evaluations will inform Gateway Reviews for the project (see below and Action Plan above) and it is expected that they will make clear recommendations for adjustment to the MICM delivery strategy to optimise benefits.

Gateway review and internal audit arrangements

The following Gateway reviews will be undertaken:

- Gateway 3 “Investment Decision” reviews will form part of the FBC approval process;
- A Gateway 4 “Readiness for Service” review will be undertaken towards the end of the construction process and prior to going live;
- A Gateway 5 “Operational Review and Benefits Realisation” review will be undertaken once the project is live;
- The interim and impact evaluations will be used to support Gateway 0 Strategic Assessment reviews.

In addition to Gateway Reviews, MICM will also be the subject of regular in-life reviews by the Moray Growth Deal Board in line with MGD’s assurance procedures. Internal HIE audits of project performance (expected to be every two years) will also be undertaken in line with HIE’s own project governance arrangements. The specific approach will depend on whether the MICM is projectised within HIE or delivered through an outsourced Contract for Services.

Contingency plans

In relation to capital works, cost estimates prepared by Torrance Partnership include a works contingency budget of 5% for Unit 9 and Unit 10 and the new build grow-on space. HIE has allowed a further 10% contingency on the Unit 9 capital costs to reflect that the detailed design for these works has not yet completed.

In relation to revenue services, the revenue model includes a 10% contingency on all revenue costs.

These contingency estimates will be reviewed as the detailed design work progresses.

Utilisation of final contingency budgets during project delivery will be subject to rigorous change control procedures, as outlined above.

The phased development of the project and the commissioning of formal evaluations, in addition to ongoing performance management by the SRO and Project Board, will provide HIE with the opportunity to review performance and assess whether an alternative direction needs to be taken at key points during the Growth Deal period.

Communications plan

A communications plan will be developed following the outcome of the final approval processes agreed for MICM. This will be aligned with broader Moray Growth Deal, HIE and Moray Council communication planning and any announcements regarding approval of the MICM FBC will be co-ordinated with the Moray Growth Deal Programme Director. The promotional strategy for MICM will also be agreed with the Moray Growth Deal.

MICM operating model transition

Figure 6.1 on the following page shows how it is anticipated that the MICM operating model will transition over the lifetime of the Growth Deal Programme and beyond.

Until the end of the Growth Deal period MICM will be managed as a HIE project, governed by a Project Board and with the HIE Area Manager as SRO.

As MICM builds up its revenue streams and approaches self-sufficiency, HIE will work with the MICM Project Board and MICM Director on a transition plan that will lead to MICM becoming a standalone entity by 31st March 2031. As part of that process, the current working assumption is that HIE will facilitate the transfer of assets to the standalone entity.

As noted above, it is expected that the impact evaluation of MICM in 2029/30 will actively explore the feasibility of a standalone entity and support HIE and the MICM Project Board in assessing options. Engagement will be sought with the Moray Growth Deal Partnership Board and Scottish and UK Government stakeholders at the appropriate time to ensure full compliance with Growth Deal grant terms and conditions.

Figure 6.1: MICM operating model transition

Appendices

1	**SOC and OBC options development**
2	**Economic Impact Assessment method and detailed results**
3	**Logic Model**
4	**Optimism Bias Assessment**
5	**Carbon Categorisation Form**
6	**Risk register**
7	**Capital works - cost estimates**
8	**Capital works – contract template**
9	**Equalities Impact and Fairer Scotland Duty Impact Assessment**
10	**HIE Equality and Diversity Policy**
11	**Carbon assessments**

Appendix 1: SOC and OBC options development

STRATEGIC OUTLINE CASE (SOC) OPTIONS DEVELOPMENT

Scope options

The following main intervention options were considered at SOC stage in relation to project scope:

- Option 2 – the 'minimum' scope – Draw in resource from elsewhere but no physical presence
- Option 3 – the 'intermediate' scope – Establish formal links to NMIS and one project post based in Moray
- Option 4 – the 'intermediate-plus' scope – Sharp focus on SMEs, with purposeful links to national resources such as catapults and NMIS. Facilities and staff to execute business-led projects
- Option 5 - 'maximum' scope – Bespoke large facility, with academic staff and project staff.

The table below summarises the assessment of each option against the investment objectives and CSFs.

Reference to:	Option 1	Option 2	Option 3	Option 4	Option 5
Scope	Do Nothing	Minimum	Intermediate	Intermediate	Maximum
	Do nothing	Draw in resource from elsewhere but no physical presence	Establish formal links to NMIS and one project post based in Moray	Sharp focus on SMEs, with links to national resources such as NMIS. Facilities and staff to deliver purpose	Bespoke large facility, with academic staff and project staff.
Objectives					
Increased productivity	N	?	Y	YY	Y
Higher paid jobs	N	?	Y	YY	Y
Improved skills offer	N	?	Y	Y	YY
CSF's					
Strategic Fit (Vision / Gov Policy)	N	?	Y	Y	YY
Potential VFM	N	N	Y	YY	Y
Potential Achievability	N	Y	Y	YY	Y
Supply side capacity	N	Y	Y	YY	Y
Potential Affordability	N	Y	YY	Y	Y
Summary	Discounted	Discounted	Possible	Preferred	Possible

Service solution options

Against the preferred scope from above; the table and narrative below summarises the assessment of each option for service solution against the investment objectives and CSFs.

Reference to:	Option 1	Option 2	Option 3	Option 4	Option 5
Service Solution for Sharp focus on SMEs, with links to national resources such as NMIS. Facilities and staff to deliver purpose	Do Nothing Do nothing	Minimum Lease space in an existing building, limited access for testing as required, staffed by project officer	Intermediate Use space in an existing building with some ability to experiment and test with a project officer	Intermediate Suitable space for manufacturing R&D requirements. Staffing available for SME project support through execution.	Maximum Use of an entire building adapted for all requirements, and with equipment to be loaned out. Full staffing team including academia, SMAS presence and other links onsite
Objectives					
Increased productivity	N	Y	Y	YY	Y
Higher paid jobs	N	Y	Y	YY	Y
Improved skills offer	N	N	Y	Y	YY
CSF's					
Strategic Fit (Vision / Gov Policy)	N	?	Y	Y	YY
Potential VFM	N	N	Y	YY	Y
Potential Achievability	N	Y	Y	YY	Y
Supply side capacity	N	N	Y	YY	Y
Potential Affordability	N	Y	Y	YY	Y
Summary	Discounted	Discounted	Possible	Preferred	Possible

Service delivery options

This range of options considered the options for service delivery in relation to the preferred scope and potential solution. The table below summarises the assessment of each option against the investment objectives and CSFs.

Reference to:	Option 1	Option 2	Option 3	Option 4	Option 5
Service Delivery for Sharp focus on SMEs, with links to national resources such as NMIS. Facilities and staff to deliver purpose Suitable space for manufacturing R&D requirements. Staffing available for SME project support through execution.	Do Nothing Do nothing	Minimum Delivered in-house using existing public sector building with capacity and project officer	Intermediate Delivered in house. Equipment leased and borrowed. Short term project staff recruited.	Intermediate Delivered in collaboration with UK relevant experts. Lease or purchase of suitable building and project staff recruited. Equipment sought as needed.	Maximum Delivered in collaboration with UK experts. New build option to ensure suitable premises for purpose. Equipment purchased. Permanent staff recruited
Objectives					
Increased productivity	N	Y	Y	YY	Y
Higher paid jobs	N	?	?	YY	Y
Improved skills offer	N	Y	Y	YY	Y
CSF's					
Strategic Fit (Vision / Gov Policy)	N	?	Y	YY	Y
Potential VFM	N	?	Y	YY	Y
Potential Achievability	N	?	Y	YY	Y
Supply side capacity	N	?	Y	Y	Y
Potential Affordability	N	Y	YY	Y	Y
Summary	Discounted	Discounted	Possible	Preferred	Possible

Implementation options

This range of options considers the choices for implementation in relation to the preferred scope, solution and method of service delivery. The table below summarises the assessment of each option against the investment objectives and critical success factors.

Reference to:	Option 1	Option 2	Option 3	Option 4	Option 5
Implementation for Sharp focus on SMEs, with links to national resources such as NMIS. Facilities and staff to deliver purpose Suitable space for manufacturing R&D requirements. Staffing available for SME project support through execution. Delivered in collaboration with UK relevant experts. Lease or purchase of suitable building and project staff recruited. Equipment sought as needed.	Do Nothing Do nothing	Minimum Recruitment of staff, and sourcing of premises at the same time to immediately commence delivery. 12 months to followed by securing premises and build up of equipment phased over a period of 12-24 months only moving on when previous phase has demonstrated impact	Intermediate Phased time bound approach, as option 2 but over no more than a 12 month period	Intermediate Recruitment of staff immediately to build momentum. Quickly followed by premises and SME projects. Six months to commencement.	Maximum Big bang - everything in place from day one.
Objectives					
Increased productivity	N	Y	Y	YY	Y
Higher paid jobs	N	Y	Y	YY	Y
Improved skills offer	N	Y	Y	YY	Y
CSF's					
Strategic Fit (Vision / Gov Policy)	N	Y	Y	Y	YY
Potential VFM	N	?	Y	YY	Y
Potential Achievability	N	Y	Y	YY	Y
Supply side capacity	N	?	Y	YY	Y
Potential Affordability	N	Y	Y	YY	Y
Summary	Discounted	Discounted	Possible	Preferred	Possible

Funding options

This range of options considers the choices for funding and financing in relation to the preferred scope, solution, method of service delivery and implementation. The table below summarises the assessment of each option against the investment objectives and critical success factors.

Funding for Sharp focus on SMEs, with links to national resources such as NMIS. Facilities and staff to deliver purpose Suitable space for manufacturing R&D requirements. Staffing available for SME project support through execution. Delivered in collaboration with UK relevant experts. Lease or purchase of suitable building and project staff recruited. Equipment sought as needed. Recruitment of staff immediately to build momentum. Quickly followed by premises and SME projects. Six months to commencement.	Do Nothing	Minimum	Intermediate	Intermediate	Maximum
	Do nothing	N/A	Over 10 years, as option 4 but minimal premises and capital equipment budget of £4 million total. One member of staff costing £600,000.	Over 10 years, premises £4 million, capital equipment £4 million, four members of staff and on-costs £2.5 million, revenue operations £2.5 million, projects £3 million.	Over 10 years, as option 4 but with academic partners onsite costing £5 million and £2 million additional capital budget for buildings and equipment.
Objectives					
Increased productivity	N		Y	YY	Y
Higher paid jobs	N		Y	YY	Y
Improved skills offer	N		Y	YY	Y
CSF's					
Strategic Fit (Vision / Gov Policy)	N		Y	YY	Y
Potential VFM	N		Y	YY	Y
Potential Achievability	N		YY	Y	Y
Supply side capacity	N		Y	YY	Y
Potential Affordability	N		Y	YY	Y
Summary	**Discounted**	**Discounted**	Possible	**Preferred**	Possible

Short-listed options (at SOC stage)

The 'preferred' and 'possible' options identified were taken as the starting point for the short list for detailed appraisal within the OBC. Section 3 (Economic Case) explains how these were evolved further.

EVOLUTION OF OPTIONS AT OUTLINE BUSINESS CASE (OBC) STAGE

Five options were short-listed for more detailed appraisal in the OBC. In addition to the Business as Usual Reference Case (Option 1), four intervention options were explored in detail:

- **Option 2: A Virtual Manufacturing Innovation Hub**, strengthening the co-ordination of existing service delivery and acting as a hub for signposting of support and events organisation targeted at manufacturing businesses;
- **Option 3: A standalone Manufacturing Innovation Centre in Forres** - The construction of a new Manufacturing Innovation Centre for Moray on the Forres Enterprise Park, providing a physical base for the co-ordination activities delivered in Option 1, including desks for HIE, SMAS and Interface, and with the additional provision of incubator units to encourage the start-up of new manufacturing businesses;
- **Option 4: Co-location of MICM within the Moray Aerospace, Advanced Technology and Innovation Campus (MAATIC), which is being developed in conjunction with Boeing adjacent to the £3bn Poseidon investment at RAF Lossiemouth** – offering direct access for MICM beneficiaries to UHI's Advanced Technologies Institute and Aviation Academy as well as an essential shared space for networking and events in MAATIC's Atrium;

- **Option 5: Co-location of MICM and grow-on units within the Moray Aerospace, Advanced Technology and Innovation Campus (MAATIC) at Lossiemouth** – with all of the benefits of Option 4, and in addition providing grow-on space, on flexible terms, for companies graduating from the incubation centre as well as potential inward investors.

The OBC options analysis demonstrated that a physical innovation centre offered clear advantages to a virtual hub approach and it identified Option 5 as the preferred option.

Appendix 2: Economic Impact Assessment

OVERVIEW

Table EIA.1 sets out the principal components of the economic impact assessment prepared by Colin Warnock Associates, including the indicators used, the valuation approaches adopted and the spatial levels for which results have been produced. Except for temporary construction effects, all these benefit types have been included in the Benefit Cost Ratio.

Table EIA.1: components of the EIA

Phase	Type of benefit / disbenefit	Indicator specification	Valuation	Duration	Geography	In BCR?
CONSTRUCTION	**Construction jobs**	Net additional construction job years	Income and GVA	Temporary, one-off	Moray, H&Is, Scotland, UK	No
	Capital carbon (part of "Whole Life Carbon" / "Carbon Emissions Impact")	"Capital carbon" (i.e., net additional tonnes CO_2) embodied in construction materials	Value of tonnes CO_2	Temporary, one-off	UK	Yes
OPERATIONAL	**Jobs at MICM**	MICM service staff and net additional direct (operational) jobs in MICM Hub incubator tenants	Income and GVA	10, 15 and 25 year snapshots	Moray, H&Is, Scotland, UK	Yes (GVA)
	Operational carbon (part of "Whole Life Carbon" / "Carbon Emissions Impact")	Operational (floorspace): net additional direct tonnes CO_2 impact of MICM Hub and MICM Grow-on space	Value of tonnes CO_2	10, 15 and 25 year snapshots	Moray, H&Is, Scotland, UK	Yes
CATALYTIC	**Indigenous business growth and productivity improvements**	Catalytic: net additional jobs, income and GVA from growth in businesses through MICM support	Income and GVA	10, 15 and 25 year snapshots	Moray, H&Is, Scotland, UK	Yes (GVA)
	Businesses graduating from the MICM incubator	Catalytic: net additional jobs, income and GVA from graduation, survival, and growth of businesses from the MICM incubator	Income and GVA	10, 15 and 25 year snapshots	Moray, H&Is, Scotland, UK	Yes (GVA)
	Inward investment jobs attracted to Moray by MICM	Catalytic: inward investment jobs	Income and GVA	10, 15 and 25 year snapshots	Moray, H&Is, Scotland, UK	Yes (GVA)

CONSTRUCTION IMPACTS

Construction job years

The approach used to estimate construction employment is in line with HIE's standard economic impact assessment methodology and begins by utilising the Scottish Input-Output Tables to translate construction expenditure into employment, income and GVA.

To the extent that all the capital expenditure is considered additional, all these employment effects are regarded as 100% gross additional.

Utilisation of Type I and Type II multipliers using the Scottish Input-Output Tables and UK-level Type I multipliers for the UK has enabled estimates to be made of the associated income and GVA impacts of these jobs at the Moray, Highlands & Islands, Scotland, and UK levels. The model assumes that the Moray share of the Scottish Type I (supply chain) multiplier is 30%, that the Highlands and Islands share is 50% and that UK multiplier is 125% of the Scottish multiplier. For the induced (wages and salaries) effect within the Type II multiplier, the model assumes a Moray share of 25%, a Highlands and Islands share of 40%, and that the UK multiplier is 120% of the Scottish multiplier.

While construction impacts are included for completeness, they are excluded from the Benefit Cost Ratio and Net Present Social Value calculations given their temporary nature, in line with guidance provided by OCEA at the OBC stage.

Capital carbon / embodied carbon

Capital carbon has been estimated by Graham and Sibbald for the MICM Hub element of Option 2 (re-use of Unit 9) and Option 3 (new build) as part of the FBC process. Their approach and results can be found in Appendix 11 and the output of their work was capital carbon expressed as tonnes or tonnes per sq. m.

For the grow-on space component in Option 2, capital carbon tonnes per sq. m associated with the refurbishment of Unit 9 was applied to the reconfiguration works for the grow-on space at Unit 10. This was then added to the capital carbon estimated for the 250 sq. m of new build grow-on space in Option 2. The latter was derived using the same ready-reckoner for capital carbon tonnes per sq. m of new build floorspace provided by Graham and Sibbald in Appendix 11. In Option 3, where all of the grow-on space is new build, the new build ready-reckoner was applied to the total new build grow-on floorspace being provided in that option.

These calculations provided total tonnes of capital carbon in each option. The level of capital carbon is very low in Option 2 and higher in Option 3 because of the different levels and types of construction activity involved in each option.

The application of these results in the FBC economic impact model involved profiling the consumption of capital carbon over time using the capital expenditure cashflow as a proxy so that the BEIS[34] central carbon prices (November 2022 update) could then be applied each year.

[34] https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal

The future annual profile of the value of capital carbon from 2024/25 onwards was then discounted to 2023/24 (year 0, the year of appraisal) at a discount rate of 3.5%, HM Treasury's Social Time Preference Rate to yield a Present Value of Capital Carbon per option, expressed as a one-off disbenefit.

OPERATIONAL IMPACTS

Jobs at MICM and associated income and GVA

Delivery of the MICM service is forecast to require 2.5 net additional FTEs (before multiplier effects).

In addition, jobs will be accommodated through the occupancy of incubator floorspace at the MICM Hub. The quantum of incubator space is set out in the Commercial Case and the occupancy build-up and void assumptions are shown in the revenue model in the Financial Case. The approach has been to apply a cautious employment density of 25 sq. m per job to occupied incubator space, based on the Homes and Communities Agency's 2016 Employment Densities Guidance. This generates approximately 11 FTEs once five of the six incubator units are occupied.

Sectoral data for 2020 from the Scottish Annual Business Survey (SABS) was used to generate turnover, GVA and income associated with these jobs.

For the MICM staff, the following sector data was used:

- SIC Divisions 69-75 Professional, Scientific and Technical Activities, was applied to the MICM Director and MICM Manager
- SIC Division 77-82 Administrative and support service activities, was applied to the part-time MICM Administrator position.

For the incubator jobs, a weighted average was taken of the following manufacturing sectors:

- SIC Divisions 10, 11, 12 Manufacture of Food, Beverages, and Tobacco Products
- SIC Divisions 16, 17, 18 Manufacture of Wood, Paper, and Printing Products
- SIC Divisions 24, 25, 28, 29, 30 Manufacture of Basic and Fabricated metals, Machinery, Motor Vehicles and Other transport equipment.

Using the GDP deflator (ONS June 2023 release), these 2020 SABS estimates of GVA and income per job were inflated to 2023/24 prices.

The same assumptions were made to both intervention options since the operating model for MICM is assumed to be identical between the two different capital options.

The following additionality assumptions were then applied:

- **Deadweight** – it assumed that none of the benefits of MICM would occur under the Option 1 do nothing / reference case option. Deadweight is therefore assumed to be 0% in both Option 2 and Option 3.
- **Displacement** – product market displacement arising from competition by business beneficiaries of MICM at the different geographies described above. This was based

on the response to a question in the FBC business survey which asked, *"if your business was to cease trading tomorrow, what proportion of your turnover (by value) would be taken by competitors located elsewhere in Moray, elsewhere in the Highlands and Islands, elsewhere in Scotland and elsewhere in the UK."* The displacement adjustment, shown in Table EIA.2 below, was applied to both intervention options.

- **Labour market substitution** – unlike displacement and leakage, there is no primary evidence which would support a specific substitution assumption for MICM. However, insofar as the proposal does not offer any public sector subsidy to firms, the level of poaching of staff stimulated by MICM is regarded to be relatively low. Nevertheless, a cautious approach has been adopted. The mean rate of substitution in the BIS Additionality Guidance[35] is 2.8% for individual enterprise support at the sub-regional level, so we have applied 3% in the EIA model for Moray and 5% for all the other spatial levels of analysis. These assumptions were applied to both intervention options.

- **Leakage** – the proportion of jobs taken by residents living outside each level of geography. The business survey asked where employees live, and these results were used to calibrate the leakage assumption (see Table EIA.2 below). Again, the same assumptions were applied to both intervention options.

- **Multipliers** –both indirect (through the business supply chain) and induced (spending of wages and salaries of those employed directly and indirectly) using the sectoral mixes discussed above and drawing on the Scottish Input-Output Tables for those sectors. The same assumptions were applied to both intervention options. The shares of the Scottish multipliers used at each level of geography can be found in Table EIA.2.

Table EIA.2 sets out the full range of additionality assumptions applied to both intervention Options.

Table EIA.2: additionality assumptions – operational jobs

	Moray	Highlands and Islands	Scotland	United Kingdom
Deadweight	0%	0%	0%	0%
Product/Service Displacement	21%	25%	55%	88%
Labour Market Substitution	3%	5%	5%	5%
Leakage	20%	10%	0%	0%
Share of Scottish Type I multiplier	30%	50%	100%	125%
Share of Scottish induced multiplier effect (Type II minus Type I)	25%	40%	100%	120%
Type I Multiplier applied	1.4	1.7	1.5	1.6
Type II Multiplier applied	1.6	2.0	1.7	2.0

Applying all these assumptions generates a stream of future annual income and GVA benefits from 2024/25 (Year 1) to 2048/49 (Year 25), before discounting back to Year 0

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/191512/Research_to_improve_the_assessment_of_additionality.pdf

(2023/24) at 3.5%, the Social Time Preference Rate. Profiles were created to provide snapshots of total benefits generated by year 10, year 15 and year 25 at each of the four geographies.

Operational carbon

Operational carbon has been estimated by Graham and Sibbald as part of the FBC process for both intervention options. The approach and results can be found in Appendix 11. The outputs of this work were tonnes of operational carbon per annum for the MICM Hub element. These were applied, on a per sq. m basis, to the grow-on space in both options to generate a total operational carbon per annum expressed in tonnes. Operational carbon was assumed to be the same across the two intervention options.

The application of these results in the FBC economic impact model has involved profiling the consumption of operational carbon over a 25 year period from 2023/24 to 2048/49 so that correct BEIS[36] carbon prices could then be applied each year.

The annual profile of operational carbon values was then discounted to 2023/24 (year 0, the year of appraisal) at a discount rate of 3.5%, HM Treasury's Social Time Preference Rate to yield a Present Value of future Operational Carbon per option. Profiles were created to provide snapshots of total benefits generated by year 10, year 15 and year 25.

CATALYTIC IMPACTS

Growth and productivity improvements in manufacturing SMEs resulting from MICM advice and support

SABS 2022 data shows that there are 215 manufacturing businesses in Moray. Of these, 180 have 1-49 employees, 25 businesses have 50-249 employees and 15 have 250 employees or more. Stakeholder discussions have established that only around 20% of the total number of businesses (i.e., 40-45 businesses) are in receipt of innovation support. In line with the assumption made at OBC stage, and with the revenue model assumptions, the FBC assumes that the additional profile, focus and dedicated support that will be offered through MICM will enable a further 20% of businesses (43 businesses) to be provided with innovation support which they would not otherwise have accessed without MICM.

For the purposes of the EIA, the cautious assumption is made that the rate of engagement will start at the 20% baseline and improve at a rate of 5% per annum over 10 years, capped at 40% (i.e., an additional 43 firms) by 2033/34.

Baseline performance has been assessed using 2022 SABS data for manufacturing firms in Moray. A performance impact from engaging with MICM is then applied. The business survey presented in the Strategic Case showed that businesses themselves would expect to see some growth benefits from engaging with MICM. The Strategic Case notes that: *"over 50% of the businesses considered that the overall impact could be between 11-25% of their 2022 baseline sales, although a small percentage suggested it could be higher at between 26-50%. Around 30% considered it would be between 1-10%"*.

The following business growth assumptions are then assumed to be gross additional because of MICM's intervention:

- The level of impact is a 12.5% one-off increase in the scale of the company's turnover, employment, GVA and income

[36] https://www.gov.uk/government/publications/valuation-of-energy-use-and-greenhouse-gas-emissions-for-appraisal

- The impact occurs 1 year after the intervention
- The one-off impact persists for a total of three years only.

Applying the same manufacturing sector assumptions as for the incubator jobs and associated GVA per FTE and income per FTE, and applying the same leakage, displacement and multiplier assumptions, generates an annual profile of net additional employment, income and GVA each year. The income and GVA benefits were then discounted to 2023/24 at 3.5% to generate Present Value catalytic income and GVA benefits from the incubator.

Businesses graduating from the MICM Hub incubator units

The following assumptions were used:

- Proportion of businesses graduating from the MICM incubator each year: 5% (source: Oxford Innovation)
- Baseline employment of businesses at the point of graduation from the incubator: 2 FTEs
- Post-graduation annual growth rate of businesses: 1.1 FTEs per annum (source: Oxford Innovation)
- Survival rates of graduating businesses starting at 100% in Years 1 and 2 and falling to 45% by Year 8 (source: Oxford Innovation) and then 30% by Year 17 and beyond (CWA assumption).

For appraisal purposes, it is assumed that these businesses would not have started at MICM nor graduated without MICM support, including the provision of grow-on space. It is worth highlighting that in order to avoid double counting, no benefits have been attributed to the MICM Grow-on space because it is assumed that the same incubator graduates would potentially expand into those units.

Applying these assumptions generates a profile of surviving gross additional FTEs resulting from incubator graduations over a 25 year appraisal period to 2048/49.

Applying the same GVA per FTE, income per FTE and leakage, displacement and multiplier assumptions generates an annual profile of net additional employment, income and GVA each year. The income and GVA benefits were then discounted to 2023/24 at 3.5% to generate Present Value catalytic income and GVA benefits from the incubator.

Inward investment jobs attracted to Moray by the presence of MICM

The EIA model assumes that in the Option 2 or Option 3 intervention options, the presence of MICM would attract two 10-job (FTEs) inward investment projects to Moray (one inward investment project in 2027/28 and a second one in 2031/32). For modelling purposes all 20 inward investment FTEs are assumed to be in premises other than MICM, but plausibly they would be located at Enterprise Park Forres. These are arbitrary, cautious assumptions but are judged by CWA to be plausible given the wider cluster development ambitions of MICM as set out in the FBC.

The same adjustments for deadweight, leakage, displacement, and multipliers are applied and a future stream of income and GVA benefits is generated. The income and GVA benefits were then discounted to 2023/24 at 3.5% to generate Present Value catalytic income and GVA benefits from inward investment.

These benefits were then added to those from the indigenous growth and incubator graduations to allow an estimate to be made of total catalytic jobs, income and GVA benefits at the Moray, Highlands & Islands, Scotland, and UK levels over 10, 15 and 25 years from 2024/25 (year 1).

Overall assessment of costs, benefits, Benefit Cost Ratios (BCRs) and Net Present Social Value

The benefit summaries on the following pages set out all of the net additional construction, operational and catalytic benefits estimated from MICM in Options 2 and 3, over and above the Option 1 reference case. The tables also show the PV of net public sector cost, the Net Present Social Value and Benefit Cost Ratio of each option at the four spatial levels and are provided in the same format for snapshots at 10, 15 and 25 years.

OPTIONS 2 AND 3: NET ADDITIONAL BENEFITS AND VALUE FOR MONEY AT MORAY, HIGHLANDS AND ISLANDS, SCOTLAND AND UK LEVELS - OVER 10 YEARS

10 YEARS	MORAY		H&IS		SCOTLAND		UK	
	Option 2	Option 3	Option 2	Option 3	Option 2	Option 3	Option 2	Option 3
One-off construction & equipment benefits - employment (job years)	19	48	22	54	24	61	21	53
One-off construction & equipment benefits - income	506,325	1,269,177	580,752	1,455,741	655,180	1,642,304	574,310	1,439,593
One-off construction & equipment benefits - GVA	1,060,738	2,658,894	1,219,846	3,057,721	1,060,738	3,456,548	1,212,264	3,038,716
Capital carbon disbenefit	-26,724	-224,227	-26,724	-224,227	-26,724	-224,227	-26,724	-224,227
Operational carbon benefit/disbenefit	-154,005	-154,005	-154,005	-154,005	-154,005	-154,005	-154,005	-154,005
Direct, on-site operational benefits - employment (job years)	107	107	129	129	118	118	35	35
Direct, on-site operational benefits - income	2,321,974	2,321,974	2,691,592	2,691,592	2,293,484	2,293,484	670,895	670,895
Direct, on-site operational benefits - GVA	6,403,913	6,403,913	7,502,962	7,502,962	6,549,283	6,549,283	1,928,285	1,928,285
Catalytic benefits - incubator graduations - employment (job years)	71	71	85	85	130	130	146	146
Catalytic benefits - incubator graduations - income	567,933	567,933	658,338	658,338	934,941	934,941	1,025,590	1,025,590
Catalytic benefits - incubator graduations - GVA	1,674,657	1,674,657	1,952,512	1,952,512	2,813,218	2,813,218	3,096,876	3,096,876
Catalytic benefits - indigenous business growth and productivity - employment (job years	257	257	309	309	283	283	84	84
Catalytic benefits - indigenous business growth and productivity - income	5,653,179	5,653,179	6,553,066	6,553,066	5,583,816	5,583,816	1,633,389	1,633,389
Catalytic benefits - indigenous business growth and productivity - GVA	14,000,011	14,000,011	14,833,085	14,833,085	10,251,987	10,251,987	2,776,547	2,776,547
Catalytic benefits - inward investment - employment (job years)	181	181	217	217	311	311	349	349
Catalytic benefits - inward investment - income	1,979,216	1,979,216	2,282,376	2,282,376	3,050,659	3,050,659	3,346,443	3,346,443
Catalytic benefits - inward investment - GVA	5,458,599	5,458,599	6,362,251	6,362,251	8,711,473	8,711,473	9,618,344	9,618,344
PV net additional monetised benefits over 10 years - all, incl. carbon & construction	28,417,188	29,817,841	31,689,926	33,330,298	29,205,969	31,404,277	18,451,587	20,080,536
PV net additional monetised benefits over 10 years, incl. carbon, excl. construction	27,356,451	27,158,947	30,470,080	30,272,577	28,145,231	27,947,728	17,239,323	17,041,820
PV net additional costs over 10 years (incl. OB on capex costs)	6,119,769	12,271,394	6,119,769	12,271,394	6,119,769	12,271,394	6,119,769	12,271,394
Benefit Cost Ratio (10 years) (incl. carbon, excl construction)	**4.5**	**2.2**	**5.0**	**2**	**4.6**	**2**	**2.8**	**1**
Benefit Cost Ratio (10 years) (excl. carbon, excl construction)	**4.5**	**2.2**	**5.0**	**2**	**4.6**	**2**	**2.8**	**1**
Net Present Social Value (10 years) (incl. carbon, excl. construction)	**21,236,682**	**14,887,554**	**24,350,312**	**18,001,184**	**22,025,463**	**15,676,335**	**11,119,554**	**4,770,426**

OPTIONS 2 AND 3: NET ADDITIONAL BENEFITS AND VALUE FOR MONEY AT MORAY, HIGHLANDS AND ISLANDS, SCOTLAND AND UK LEVELS - OVER 15 YEARS

15 YEARS	MORAY		H&IS		SCOTLAND		UK	
	Option 2	Option 3	Option 2	Option 3	Option 2	Option 3	Option 2	Option 3
One-off construction & equipment benefits - employment (job years)	19	48	22	54	24	61	21	53
One-off construction & equipment benefits - income	506,325	1,269,177	580,752	1,455,741	655,180	1,642,304	574,310	1,439,593
One-off construction & equipment benefits - GVA	1,060,738	2,658,894	1,219,846	3,057,721	1,060,738	3,456,548	1,212,264	3,038,716
Capital carbon disbenefit	-26,724	-224,227	-26,724	-224,227	-26,724	-224,227	-26,724	-224,227
Operational carbon benefit/disbenefit	-224,391	-224,391	-224,391	-224,391	-224,391	-224,391	-224,391	-224,391
Direct, on-site operational benefits - employment (job years)	107	107	129	129	118	118	35	35
Direct, on-site operational benefits - income	3,294,537	3,294,537	3,818,970	3,818,970	3,254,114	3,254,114	951,900	951,900
Direct, on-site operational benefits - GVA	9,086,203	9,086,203	10,645,590	10,645,590	9,292,461	9,292,461	2,735,950	2,735,950
Catalytic benefits - incubator graduations - employment (job years)	110	110	132	132	201	201	225	225
Catalytic benefits - incubator graduations - income	1,393,017	1,393,017	1,614,761	1,614,761	2,293,208	2,293,208	2,515,552	2,515,552
Catalytic benefits - incubator graduations - GVA	4,107,573	4,107,573	4,789,093	4,789,093	6,900,217	6,900,217	7,595,969	7,595,969
Catalytic benefits - indigenous business growth and productivity - employment (job years	309	309	371	371	340	340	101	101
Catalytic benefits - indigenous business growth and productivity - income	6,951,456	6,951,456	8,058,006	8,058,006	6,866,163	6,866,163	2,008,504	2,008,504
Catalytic benefits - indigenous business growth and productivity - GVA	17,215,175	17,215,175	18,239,568	18,239,568	12,606,401	12,606,401	3,414,193	3,414,193
Catalytic benefits - inward investment - employment (job years)	181	181	217	217	311	311	349	349
Catalytic benefits - inward investment - income	3,621,062	3,621,062	4,175,707	4,175,707	5,581,312	5,581,312	6,122,462	6,122,462
Catalytic benefits - inward investment - GVA	9,986,744	9,986,744	11,640,014	11,640,014	15,938,018	15,938,018	17,597,179	17,597,179
PV net additional monetised benefits over 15 years - all, incl. carbon & construction	41,205,317	42,605,970	46,282,994	47,923,367	45,546,719	47,745,027	32,304,440	33,933,389
PV net additional monetised benefits over 15 years, incl. carbon, excl. construction	40,144,579	39,947,076	45,063,149	44,865,645	44,485,982	44,288,479	31,092,176	30,894,673
PV net additional costs over 15 years (incl. OB on capex costs)	6,234,244	12,385,869	6,234,244	12,385,869	6,234,244	12,385,869	6,234,244	12,385,869
Benefit Cost Ratio (15 years) (incl. carbon, excl construction)	**6.4**	**3.2**	**7.2**	**3.6**	**7.1**	**3.6**	**5.0**	**2.5**
Benefit Cost Ratio (15 years) (excl. carbon, excl construction)	**6.5**	**3.3**	**7.3**	**3.7**	**7.2**	**3.6**	**5.0**	**2.5**
Net Present Social Value (15 years) (incl. carbon, excl. construction)	**33,910,335**	**27,561,207**	**38,828,905**	**32,479,777**	**38,251,738**	**31,902,610**	**24,857,932**	**18,508,804**

OPTIONS 2 AND 3: NET ADDITIONAL BENEFITS AND VALUE FOR MONEY AT MORAY, HIGHLANDS AND ISLANDS, SCOTLAND AND UK LEVELS - OVER 10 YEARS

25 YEARS	MORAY		H&IS		SCOTLAND		UK	
	Option 2	Option 3	Option 2	Option 3	Option 2	Option 3	Option 2	Option 3
One-off construction & equipment benefits - employment (job years)	19	48	22	54	24	61	21	53
One-off construction & equipment benefits - income	506,325	1,269,177	580,752	1,455,741	655,180	1,642,304	574,310	1,439,593
One-off construction & equipment benefits - GVA	1,060,738	2,658,894	1,219,846	3,057,721	1,060,738	3,456,548	1,212,264	3,038,716
Capital carbon disbenefit	-26,724	-224,227	-26,724	-224,227	-26,724	-224,227	-26,724	-224,227
Operational carbon benefit/disbenefit	-346,252	-346,252	-346,252	-346,252	-346,252	-346,252	-346,252	-346,252
Direct, on-site operational benefits - employment (job years)	107	107	129	129	118	118	35	35
Direct, on-site operational benefits - income	4,802,877	4,802,877	5,567,411	5,567,411	4,743,947	4,743,947	1,387,709	1,387,709
Direct, on-site operational benefits - GVA	13,246,145	13,246,145	15,519,467	15,519,467	13,546,834	13,546,834	3,988,552	3,988,552
Catalytic benefits - incubator graduations - employment (job years)	206	206	247	247	378	378	423	423
Catalytic benefits - incubator graduations - income	3,608,865	3,608,865	4,183,333	4,183,333	5,940,975	5,940,975	6,516,997	6,516,997
Catalytic benefits - incubator graduations - GVA	10,641,418	10,641,418	12,407,020	12,407,020	17,876,274	17,876,274	19,678,745	19,678,745
Catalytic benefits - indigenous business growth and productivity - employment (job years	309	309	371	371	340	340	101	101
Catalytic benefits - indigenous business growth and productivity - income	6,951,456	6,951,456	8,058,006	8,058,006	6,866,163	6,866,163	2,008,504	2,008,504
Catalytic benefits - indigenous business growth and productivity - GVA	17,215,175	17,215,175	18,239,568	18,239,568	12,606,401	12,606,401	3,414,193	3,414,193
Catalytic benefits - inward investment - employment (job years)	181	181	217	217	311	311	349	349
Catalytic benefits - inward investment - income	6,167,387	6,167,387	7,112,057	7,112,057	9,506,083	9,506,083	10,427,769	10,427,769
Catalytic benefits - inward investment - GVA	17,009,408	17,009,408	19,825,254	19,825,254	27,145,608	27,145,608	29,971,489	29,971,489
PV net additional monetised benefits over 25 years - all, incl. carbon & construction	58,799,907	60,200,560	66,838,178	68,478,550	71,862,879	74,061,186	57,892,267	59,521,216
PV net additional monetised benefits over 25 years, incl. carbon, excl. construction	57,739,169	57,541,666	65,618,333	65,420,829	70,802,141	70,604,638	56,680,003	56,482,500
PV net additional costs over 25 years (incl. OB on capex costs)	6,411,783	12,563,408	6,411,783	12,563,408	6,411,783	12,563,408	6,411,783	12,563,408
Benefit Cost Ratio (25 years) (incl. carbon, excl construction)	**9.0**	**4.6**	**10.2**	**5.2**	**11.0**	**5.6**	**8.8**	**4.5**
Benefit Cost Ratio (25 years) (excl. carbon, excl construction)	**9.1**	**4.6**	**10.3**	**5.3**	**11.1**	**5.7**	**8.9**	**4.5**
Net Present Social Value (25 years) (incl. carbon, excl. construction)	**51,327,386**	**44,978,258**	**59,206,550**	**52,857,422**	**64,390,359**	**58,041,231**	**50,268,221**	**43,919,092**

Appendix 3: MICM Logic Model

Logic model for the Manufacturing Innovation Centre for Moray (MICM) project

Inputs	Activities	Outputs	Outcomes	Impacts
Resources needed to deliver the project.	Actions needed to deliver the project.	Measurable direct results of the activities.	Changes that occur to the beneficiaries and the medium-term benefits on the economy.	The long-term effect upon the economy or society
GENERAL SUPPORT FOR BUSINESS GROWTH AND COMPETITIVENESS				
£public **£private** **Capital vs revenue**	Overall no. of businesses assisted to improve their performance, of which: • SMES • Other businesses	No. of jobs created (FTEs) No. of jobs safeguarded (FTEs) No. of businesses with improved performance – GVA No. of businesses with improved performance - new products, processes or services No. of graduates placed in SMEs Increase in GVA from improved performance Increase in GVA/employee (productivity) from improved performance	Increase in Gross Value Added Workplace employment (by SIC and size of firm) % of small businesses in an area showing employment growth Productivity (GVA per employee)	GVA Employment Productivity
START-UP ASSISTANCE AND PROMOTION OF SPIN-OUTS				
£public **£private** **Capital vs revenue**	No. of businesses supported to start-up (e.g. individuals helped to start a business or HEIs or SMEs encouraged to spin-out new companies)	No. of new businesses (private companies or sole traders) No. of new businesses still in operation after 12 months GVA of new businesses still in operation after 12 months No of jobs created FTE No of jobs safeguarded FTE No of new businesses demonstrating growth from 12-24 months	Total business stock; Gross Value Added Productivity (GVA per employee) Workplace employment (by SIC and size of firm) % of small businesses in an area showing employment growth	Number of manufacturing businesses by size GVA Employment

Logic model for the Manufacturing Innovation Centre for Moray (MICM) project *(continued)*

Inputs	Activities	Outputs	Outcomes	Impacts
PROMOTION OF BUSINESS ENTERPRISE RESEARCH AND DEVELOPMENT (BERD)				
£public **£private** **Capital vs revenue**	No. of businesses engaged in new collaborations with the UK knowledge base Other activities (advice, signposting, consultancy, networking) targeted at increasing business R&D activity and the intensity of that support	Value of increased R&D in those businesses engaged with the knowledge base R&D expenditure as % of turnover in beneficiary firms No of patents filed Increase in GVA/employee (productivity) due to R&D investment	Business R&D as a proportion of GVA Gross Value Added Productivity (GVA/employee)	GVA BERD Productivity
INDUSTRIAL AND COMMERCIAL PROPERTY DEVELOPMENT				
£public **£private** **Capital vs revenue**	Sq.m. of space constructed (by type and grade) Sq metre of buildings occupied; Tonnes of Spoil Removed Hectares of land regraded Length of new site access and on-site roads constructed Installation of metres of linking and on-site service networks (sewers, water supply, gas, electricity, telecoms) Hectares of land serviced for industrial or commercial development.	Hectares of previously developed land that has been vacant or derelict for more than 5 years Occupancy level for different use (by SIC) Occupancy level (proportion of floorspace) Number of jobs accommodated (FT/PT > FTEs) No of businesses accommodated (by SIC)	% increase in stock of commercial development land % increase in commercial land values % increase in commercial property values Workplace employment (by SIC) Gross Value Added	Stock of commercial development land and floorspace Employment GVA

Appendix 4: Optimism Bias assessment

A formal Optimism Bias (OB) assessment has been conducted for the project, in accordance with HM Treasury Green Book guidance.

The first step in the OB assessment is to classify the project. For the purposes of this assessment, all of the capex works have been defined as “standard building”.

On this basis, the unmitigated upper bound OB impacts at this Full Business Case stage are standard building: 4% for Works Duration and 24% for Capital Expenditure

Figure OB.1 shows the factors contributing to Optimism Bias in works duration and capital expenditure for both types of project. This draws on research evidence by Mott MacDonald presented in Supplementary Green Book Guidance (2002) on the extent to which different factors contribute to Optimism Bias in relation to capital expenditure and works duration.

The second step in the OB assessment is to assess the level of mitigation which has been achieved so far in relation to each of these factors at this Outline Business Case stage. The level of mitigation would be expected to increase further the more advanced the project is in relation to its planning, design and procurement. The mitigation factors and responses were derived through discussion with the HIE project team and the comments show how these mitigation factors have been justified.

The third step derives the level of unmitigated OB, as shown in tables OB.2 and OB.3. This applies the mitigation factors to the starting upper bound OB in order to derive the level of unmitigated Optimism Bias which is felt to be associated with the project at this FBC stage, in relation to both capital expenditure and works duration.

Within the Cost Benefit Analysis model, the unmitigated OB figures have been used to make upward adjustments to the Present Value of all capital expenditure for the purposes of the BCR calculation in the Economic Case (Section 3).

Unfortunately, no evidence exists on Optimism Bias as it relates to project benefits or revenue costs or income. As Figure OB.1 makes clear, the principal areas that cannot be mitigated at present relate to general optimism inherent with Business Cases at this stage. Cautious benefit assumptions have been used in the EIA and the revenue costs include a 10% contingency. The Financial Case also subjects the revenue model to sensitivity testing. In addition, a 15% unmitigated Optimism Bias adjustment has been included in the value for money assessment.

The capital costs are estimates provided by Torrance Partnership based on recent procurement activity on similar HIE projects and include works contingency at 5% with a further contingency of 10% applied to Unit 9 to reflect the immaturity of the detailed design process. Even with the further addition of 5% Optimism Bias on capital expenditure, the switching value calculations in Section 3 demonstrate that benefits in the preferred option would need to fall by over 80% before the BCR would fall below 1:1 and that costs would need to increase more than six-fold.

Figure OB.1: Optimism Bias Contributory Factors & Mitigation Assessment					
Project Type (note 1)		**Standard Buildings**		**BUILDING**	**Justification For Mitigation factor**
Upper Bound Optimum Bias (note 1)		**Works Duration**	**Capital Expenditure**	**Proposed Mitigation Factor (%)**	
		4%	**24%**		
Risk Area Contributions to Recorded Optimism Bias (%)					
Procurement	Complexity of Contract Structure	1%	0%	90%	No novel contract structures will be used for building contracts. Existing HIE Procurement Frameworks and NEC4 contracts. HIE will oversee the process and have a dedicated procurement team.
	Late contractor involvement in design	3%	2%	85%	Standard works with no novel elements. Normal procurement procedures will apply.
	Poor Contractor Capabilities	4%	9%	90%	Procured through Quick Quote (Contractors already on HIE's Framework) or via Open Tender with necessary vetting in place.
	Government Guidelines	0%	0%	N/A	N/A
	Dispute and Claims Occurred	4%	29%	85%	Disputes will be mitigated with effective communication, good design input and effective project management as well as effective procurement and contract management procedures. Nevertheless, these cannot be mitigated until contracts are signed. Ask for risk register at tender stage and attribute risks to contractor vs HIE in advance to set appropriate boundaries and risk ownership
	Information management	0%	0%	N/A	N/A
	Other (specify)	0%	0%	N/A	N/A
Project Specific	Design Complexity	3%	1%	90%	Design is sustainable, proven building design with standard features and components
	Degree of Innovation	1%	4%	95%	No innovative design features
	Environmental Impact	0%	0%	N/A	N/A
	Other (specify)	0%	0%	75%	N/A
Client Specific	Inadequacy of the Business Case	31%	34%	75%	Business case has been developed in close co-operation with cost advisors and Project Board with representatives from relevant public sector agendies and private sector representatives. An action plan and risk register has been developed as part of the FBC.
	Large Number of Stakeholders	6%	0%	75%	Business case has been developed in close co-operation with project partners. A full action plan and risk register has been developed as part of the FBC.
	Funding Availability	8%	0%	90%	This FBC follows previous approval to OBC. Funding strategy agreed in principle.
	Project Management Team	0%	1%	90%	Highly experienced team in HIE with their retained advisors mitigate this item.
	Poor Project	6%	2%	80%	HIE owns Units 9 and 10 and has

Figure OB.1: Optimism Bias Contributory Factors & Mitigation Assessment					
Project Type (note 1)		**Standard Buildings**		**BUILDING**	**Justification For Mitigation factor**
Upper Bound Optimum Bias (note 1)		**Works Duration**	**Capital Expenditure**	**Proposed Mitigation Factor (%)**	
		4%	**24%**		
Risk Area Contributions to Recorded Optimism Bias (%)					
	Intelligence				plans and O&M Manuals for both. Design standards are clear and based on other HIE projects.
	Other (specify)	0%	1%	75%	
Environment	Public Relations	8%	2%	N/A	Experience of delivering previous projects at Enterprise Park Forres and managing construction activity on site and in the surrounding area; this will inform procedures and communications for MICM.
	Site Characteristics	5%	2%	85%	Enterprise Park Forres is owned by HIE and has been subject of extensive investigation; topographical and ground conditions are known.
	Permits / Consents / Approvals	9%	0%	90%	Enterprise Park Forres already has outline planning consent for these uses. Building Warrants will be needed, but the work is not contentious.
	Other (specify)	0%	0%	75%	N/A
External Influences	Political	0%	0%	95%	The Project has already received considerable positive feedback from Government. MICM is in the Regional Spatial Strategy and is identified in the national Innovation Strategy and included in the Moray Growth Deal. The project is firmly supported by HIE and Moray Council and is understood to have the support of all political parties locally.
	Economic	0%	11%	70%	Inflation on construction costs is the most significant external economic risk. Provision is made for future inflation at 6% (mid-point in advised range of 5-7% by Torrance Partnership).
	Legislation / Regulations	9%	3%	85%	No issues foreseen at this time.
	Technology	0%	0%	95%	No issues foreseen at this time.
	Other (specify)	0%	0%	95%	No issues foreseen at this time.
Notes: 1. 'Supplementary Green Book Guidance - Optimism Bias' prepared from advice provided by Mott MacDonald (2002).					

Figure OB.2: Optimism Bias Summary Table for Capital Expenditure - STANDARD BUILDING

Project Type					Standard Building
(a)	Estimated Cost				100%
(b)	Upper bound Optimism Bias				24%
	Risk Area	Gross Contribution to optimism bias (%)	Mitigation factor (%)	Net Contribution (%)	
Procurement	Complexity of Contract Structure	0%	90%	0.00%	
	Late contractor involvement in design	2%	85%	1.70%	
	Poor Contractor Capabilities	9%	90%	8.10%	
	Government Guidelines	0%	N/A	0.00%	
	Dispute and Claims Occurred	29%	85%	**24.65%**	
	Information management	0%	N/A	0.00%	
	Other (specify)	0%	N/A	0.00%	
Project Specific	Design Complexity	1%	90%	0.90%	
	Degree of Innovation	4%	95%	3.80%	
	Environmental Impact	0%	N/A	0.00%	
	Other (specify)	0%	75%	0.00%	
Client Specific	Inadequacy of the Business Case	34%	75%	25.50%	
	Large Number of Stakeholders	0%	75%	0.00%	
	Funding Availability	0%	90%	0.00%	
	Project Management Team	1%	90%	0.90%	
	Poor Project Intelligence	2%	80%	1.60%	
	Other (specify)	1%	75%	0.75%	
Environment	Public Relations	2%	N/A	0.00%	
	Site Characteristics	2%	85%	1.70%	
	Permits / Consents / Approvals	0%	90%	0.00%	
	Other (specify)	0%	75%	0.00%	
External Influences	Political	0%	95%	0.00%	
	Economic	11%	70%	7.70%	
	Legislation / Regulations	3%	85%	2.55%	
	Technology	0%	95%	0.00%	
	Other (specify)	0%	95%	0.00%	
(c)	Total % by which upper bound OB can be mitigated			79.9%	
(d)=bxc	Less mitigated Optimism Bias contribution (%)				19.2%
(e)=b-d	Unmitigated Optimism Bias (%)				4.8%
(f)	Cost of risk management (% of base cost)				0% (base costs include contingency already)
(g)=e+f	Total Optimism Bias %				4.8%
(h)=a+e+f	Base Cost adjusted for total mitigated Optimism Bias (%)				104.8%
					OB is applied at 5% / 105% of base cost

Figure OB.3: Optimism Bias Summary Table for Works Duration - STANDARD BUILDING

Project Type					Standard Building
(a)	Estimated Works Duration				100%
(b)	Upper bound Optimism Bias				4%
	Risk Area	Gross Contribution to optimism bias (%)	Mitigation factor (%)	Net Contribution (%)	
Procurement	Complexity of Contract Structure	1%	90%	0.90%	
	Late contractor involvement in design	3%	85%	2.55%	
	Poor Contractor Capabilities	4%	90%	3.60%	
	Government Guidelines	0%	N/A	0.00%	
	Dispute and Claims Occurred	4%	85%	3.40%	
	Information management	0%	N/A	0.00%	
	Other (specify)	0%	N/A	0.00%	
Project Specific	Design Complexity	3%	90%	2.70%	
	Degree of Innovation	1%	95%	0.95%	
	Environmental Impact	0%	N/A	0.00%	
	Other (specify)	0%	75%	0.00%	
Client Specific	Inadequacy of the Business Case	31%	75%	23.25%	
	Large Number of Stakeholders	6%	75%	0.00%	
	Funding Availability	8%	90%	7.20%	
	Project Management Team	0%	90%	0.00%	
	Poor Project Intelligence	6%	80%	4.80%	
	Other (specify)	0%	75%	0.00%	
Environment	Public Relations	8%	N/A	0.00%	
	Site Characteristics	5%	85%	4.25%	
	Permits / Consents / Approvals	9%	90%	8.10%	
	Other (specify)	0%	75%	0.00%	
External Influences	Political	0%	95%	0.00%	
	Economic	0%	70%	0.00%	
	Legislation / Regulations	9%	85%	7.65%	
	Technology	0%	95%	0.00%	
	Other (specify)	0%	95%	0.00%	
(c)	Total % by which upper bound OB can be mitigated			69.4%	
(d)=bxc	Less mitigated Optimism Bias contribution (%)				2.8%
(e)=b-d	Unmitigated Optimism Bias (%)				1.2%
(f)	Cost of risk management (% of base cost)				0% (base costs include contingency already)
(g)=e+f	Total Optimism Bias %				1.2%
(h)=a+e+f	Works Duration adjusted for total mitigated Optimism Bias (%)				101.2%
					Treated as de minimis - not applied to programme

Appendix 5: Carbon Categorisation Form

Item	Project Owner Response
1. Project Name	Manufacturing Innovation Centre for Moray (MICM)
2. Deal Region	Moray
3. Brief Description of Project	Creation of MICM Hub (incubator, service provider base and technical/demonstration space) and MICM Grow-on space through the refurbishment of existing buildings plus 250 sq.m of new build grow-on space and delivery of manufacturing innovation services (see Commercial Case)
4. Expected Carbon Emissions Impact CONTROL Category (1-5)	3
5. Expected Carbon Emissions Impact INFLUENCE Category (A-C)	B (for appraisal purposes), but actively engaging with businesses to influence them in ways which would support level A – see Q10 below.
6. Justification of Expected Carbon Emissions Impact Category e.g. a short narrative outlining the key carbon emission sources and their relationship to capital and operational net zero following the Deals Carbon Emissions Impact Categorisation Process.	**Capital carbon:** the capital works for the MICM project are primarily for property construction and refurbishment activity. To that extent it will utilise construction materials with embodied carbon. **Operational carbon:** there is a clear pathway to operational net zero. The Whole of Life Carbon Impact will be mitigated through the use of ground and air source heat pumps, good levels of insulation and solar PV. However, there will be operational carbon through building energy demand until the grid is decarbonised, there will be an element of operational carbon. MICM will be a net zero demonstrator (see Q8. below). MICM service delivery will seek to help businsses find the right support to aid them on their own net zero transition. This is the justification for the influencing category.
7. Could the Carbon Emissions Impact Category be improved? e.g. from Category 4B to Category 3A	**No.** Due to the refurbishment and new build activity, embodied carbon will inevitably be a feature of this project. An alternative new build option was rejected in determining that re-use of existing buildings should be the primary strategy.
8. Could the carbon performance of the project be improved? e.g. reducing emissions further, achieving net zero faster.	**Possibly.** During the detailed design process, efforts will be made to mitigate capital and operational carbon within the budget envelope.
9. How will carbon be managed? e.g. through PAS 2080: Carbon Management in Infrastructure for infrastructure projects or the RICS Whole Life-Cycle Carbon Professional Statement for buildings projects	A RICS Whole Life Carbon Statement will be prepared as part of the detailed design process. CENSIS will also be involved to install IoT-based sensors and measurement technology and enable the project to be used as a net zero demonstrator.
10. What other carbon savings are expected to result from the project? e.g. wider carbon savings across the economy resulting from project output	MICM will have a net zero demonstration component, but no attempt has been made at this stage to quantify the potential impact on manufacturing SMEs. To do so would risk double counting the carbon impacts of those organisations who may be involved (e.g. Business Energy Scotland, Innovation Centres). Efforts will be made to quantify this at evaluation stage.

Appendix 6: Risk Register

Ref ID	Raised by	Area of the project affected by the entry	Description of the risk	Assessment of the risk			Proposed mitigation options and approach to be taken	Mitigation strategy
				Impact	Likelihood	Risk score		
			There is a risk that.... The potential impact is.... The potential likelihood is....					
10	Project Lead	Financial	Cost inflation compromises delivery of MICM	4	4	16	Monitor. Include contingency. Propose cost savings. Explore additional funding	Reduce
11	Project Lead	Delivery	MAATIC rescoping impacts viability of MICM	4	3	12	Monitor. Ensure HIE are kept informed and that MAATIC team are updated in MICM	Reduce/share
3	OBC	Objectives & benefits	Lack of productive engagement with the business community	4	3	12	Consultation events with the Moray Growth Deal, Business Assembly and Chamber of Commerce, as well as a broader business survey. Ensure involvement with Project Board	Reduce
14	FBC	Financial	Revenue assumptions are overoptimistic	3	4	12	Sensitivity analysis in FBC , monitoring and review	Monitor
6	OBC	Delivery	Inadequate management expertise	5	2	10	Mitigated by budgeting for the recruitment of a high calibre Project Director and Centre Manager to maximise benefits	Reduce
2	OBC	Delivery	Competing demands for resources across Growth Deal projects	3	3	9	Good co-ordination between what are three highly complementary projects in order to ensure no duplication and maximise synergies	Reduce
1	OBC	Financial	Under-estimation of costs	3	3	9	Business planning process, risk assessment and Optimism Bias assessment	Reduce
7	OBC	Objectives & benefits	Lack of engagement from NMIS, SMAS, Interface, Business Gateway and others	3	2	6	Initial consultation work directly through MICM business planning or through UHI's development of the MAATIC proposal to ensure they are sighted on, and supportive of the proposals being made	Reduce/share
9	OBC	Objectives & benefits	Impact of Brexit on supply chains and business operations	2	3	6	These risks are, by definition, outside of our control, but we can mitigate to some extent through focused business advice and support, as HIE and its partners have been doing already during 2020.	Accept

Appendix 7: Capital works – cost estimates

HIGHLANDS AND ISLANDS ENTERPRISE

REFIT WORKS AT UNIT 9
FORRES ENTERPRISE PARK, MORAY

ORDER OF COST

TP Ref: 23.805

21 July 2023

Prepared by
Torrance Partnership LLP
23 Southside Road
Inverness
IV2 3BG

ORDER OF COST

HIGHLANDS AND ISLANDS ENTERPRISE
REFIT WORKS AT UNIT 9
FORRES ENTERPRISE PARK, MORAY
25th JULY, 2023

GIFA 1,072 m^2

Item	Unit	Gross Area	Total	£/m2		Sub-Totals
GENERALLY						
GF Left Hand Unit						
Downtakings						
Minor strip out works to lobby and later additions	m2	35	35	£ 50	£ 1,733	
New Work						
Review of fire / security / acoustics; provisional allowance for improvements					£ 15,000	
New double door from Reception area into Suite	no.	1	1	£ 2,500	£ 2,500	
Sub-Divide space into two Offices; include for new lowered ceiling over both offices [M&E allowed separately]	m2	140	140	£ 400	£ 56,000	£ 75,233
GF Right Hand Unit						
Downtakings						
Strip out office cubicles	m2	39	39	£ 50	£ 1,925	
Alterations to Lift position to improve function - assume turning 90 deg	sum				£ 10,000	
New Work						
Introduce fire and acoustic separation to Mezzanine above; include for glazed openings to create visual link	m2	54	54	£ 1,000	£ 54,250	
Alterations to raised access flooring and introduction of 3 No. concrete plinths approx. 2m x 2m	sum	1	1	£ 10,000	£ 10,000	
Introduce separation between GF Unit and Rear Fire Escape	sum				£ 10,000	
Remove existing window and forming loading area to front with large door	no.	1	1	£ 7,500	£ 7,500	£ 93,675
GF Rear Unit						
Alterations						
Review of fire / security / acoustics; provisional allowance for improvements					£ 15,000	
Alterations to benching	sum	1	1	£ 2,500	£ 2,500	£ 17,500
Mezzanine Area						
Alterations						
General upgrade to right hand side following separation from GF; allow for new tea prep / touchdown space	m2	136	136	£ 250	£ 34,000	
Introduce ceiling over mezzanine areas including meeting rooms	m2	240	240	£ 150	£ 36,000	
Introduce acoustic rafts in mezzanine areas; include for hanging on wires	no.	50	50	£ 150	£ 7,500	
Reconfiguration of escape stair to improve space and function at mezzanine and GF	sum	1	1	£ 10,000	£ 10,000	£ 87,500
				Carry Forward		£ 273,908

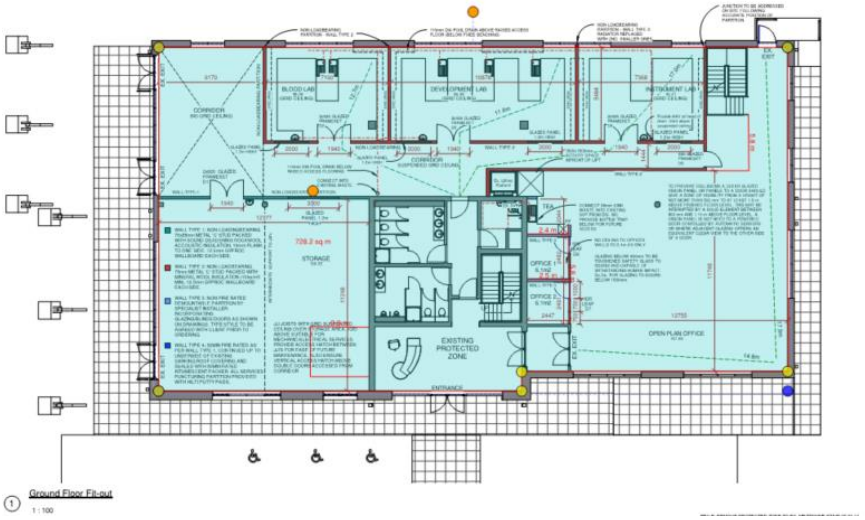
				Brought Forward		£ 273,908
Allow for alterations to FF meeting room 2 and 3 to form single incubator space	m2	64	64	£ 250	£ 16,000	£ 16,000
Main Stair						
Allowance for improvements to stair balustrade/detailing	sum	1	1	£ 7,500	£ 7,500	£ 7,500
Main Entrance						
Upgrade main entrance door to automatic opening	sum	1	1	£ 7,500	£ 7,500	£ 7,500
M&E Improvements						
Alterations to underfloor heating where flooring changes and at area where new external doors, etc.	sum	1	1	£ 10,000	£ 10,000	
Upgrade incoming electrical supply to the building; including tracking back to substation, etc.	sum	1	1	£ 70,000	£ 70,000	
Provide 3 Phase power supplies to the Incubator labs; assume 2 outlets in each lab and 2 outlets in GF area	sum	1	1	£ 10,000	£ 10,000	
Provide containment for future install of compressed air	sum	1	1	£ 5,000	£ 5,000	
Allow for upgrading existing electrical installation - power and data	m2	1072	1,072	£ 150	£ 160,800	
Allow for upgrading existing lighting to LED fittings	m2	1072	1,072	£ 80	£ 85,760	
Allow for upgrading access control to principal internal doors	no.	15	15	£ 1,500	£ 22,500	
Allow for sub-division of services within GF left hand unit to form 2 offices	m2	140	140	£ 350	£ 49,000	
Allow for alterations to services within FF meeting room 2 and 3 to form single incubator space	m2	64	64	£ 350	£ 22,400	
Introduce PV to the Roof	sum				£ 50,000	£ 485,460
General Areas						
Upgrade of signage strategy	sum				£ 5,000	
General refresh of internal decoration throughout	m2	1072	1,072	£ 40	£ 42,880	
General Builderswork in connection with Services improvements, etc.	sum	1	1	£ 20,000	£ 20,000	
Allowance for external decoration	sum	1	1	£ 5,000	£ 5,000	£ 72,880
Roof						
Improve roof insulation and acoustic performance [all internal]	m2	740	740	£ 75	£ 55,500	£ 55,500
EXTERNAL WORKS						
Alterations to external paving	m2	250	250	£ 120	£ 30,000	£ 30,000
General improvements to external landscaping	sum	1	1	£ 10,000	£ 10,000	£ 10,000
				Carry Forward		£ 958,748

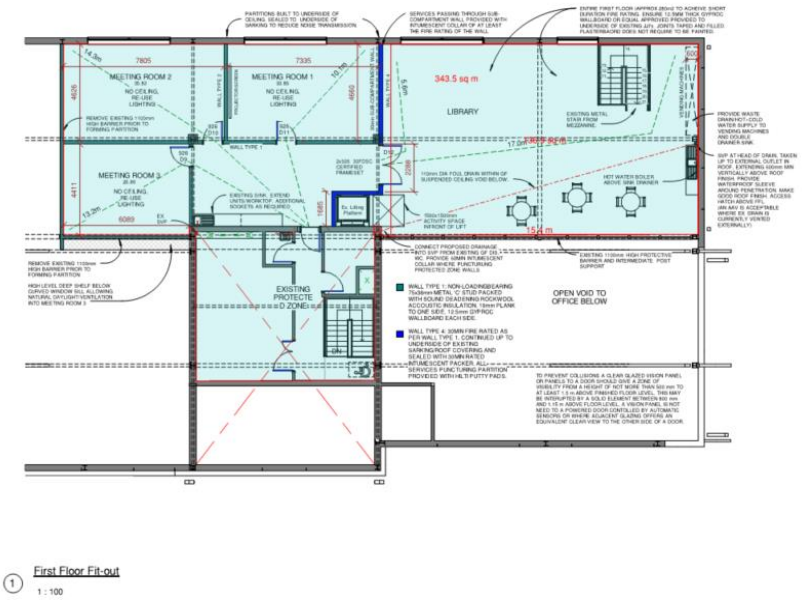
Brought Forward		£	958,748
Sub-Total Construction Costs		£	958,748
Main Contractor Prelims	15%	£	143,812
		£	1,102,560
Main Contractor Fee	7%	£	77,179
Employer Risk, *Say*	5%	£	58,987
ESTIMATED CONSTRUCTION COSTS		£	1,238,726
Design Team Fees	10%	£	123,873
Prime Consultant Fees - All Stages	[6.35% + NM]	£	83,659
Building Warrant Fees		£	4,874
Planning Fee + Advertising Fee		£	1,000
ESTIMATED UPGRADE COSTS		**£**	**1,452,131**

Notes:

1. Base date of Order of Cost - July, 2023
2. All costs are based on rates with allowances included for open tendering during **'Fourth Quarter 2023'** from Main Contractors, incorporating a NEC4 ECC Option A contract. Should the timescale for commencing construction works be more longer term then allowances in line with BCIS TPI should be made for inflation.
3. This Cost is based on outline scope and discussions with HIE and following latest floor plans for the building.
4. This Cost **includes** the following;
   i General Upgrade Works as identified.
   ii Professional Fees
   iii Building Warrant costs.
   iv Planning Fee
5. This Cost **excludes** the following;
   i Office desks, chairs, storage units and the like.
   ii Office cupboards, general shelving, loose fittings / furniture / FF&E
   iii Professional Fees in respect of the works.
   iv Value Added Tax (s*ee note below)*

Note: In relation to buildings VAT is a complex area. Therefore, it is recommended that specialist advice is sought on VAT matters to ensure that the correct rates are applied to the various aspects of a building project.





HIGHLANDS AND ISLANDS ENTERPRISE

EXTENSION TO UNIT 10
FORRES ENTERPRISE PARK, MORAY

ORDER OF COST

TP Ref: 23.805

26th July, 2023

Prepared by
Torrance Partnership LLP
23 Southside Road
Inverness
IV2 3BG

ORDER OF COST

HIGHLANDS AND ISLANDS ENTERPRISE
EXTENSION TO UNIT 10
FORRES ENTERPRISE PARK, MORAY
26th JULY, 2023

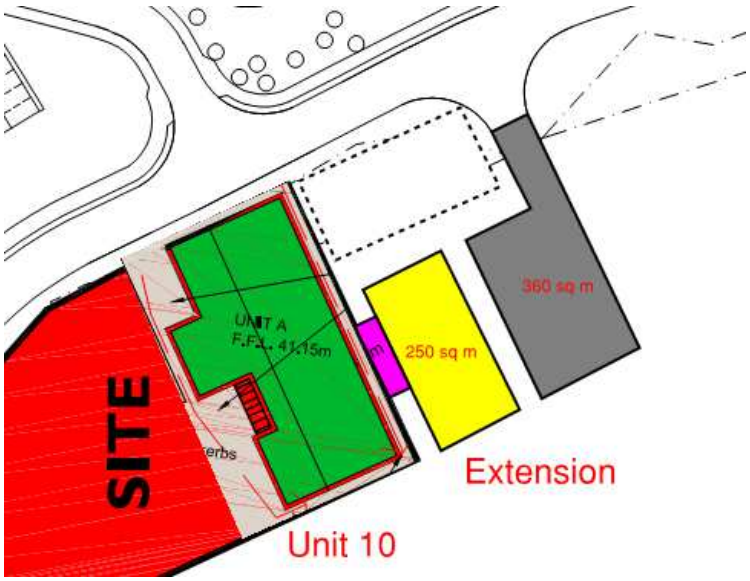
GIFA 250 m^2

Item	Unit	Gross Area	Total	£/m2		Sub-Totals
GENERALLY						
Extension to Unit 10 with link and associated access road and parking						
250m2 GFA Unit single storey; with link facility to Unit 10. Manufacturing Specification with Office Accommodation; 3-phase power, ASHP, Solar PV	m2	250	250	£ 3,250	£ 812,500	
Link facility to Unit 10	m2	30	30	£ 2,500	£ 75,000	
Minor alterations within Unit 10 comprising new opening for roller shutter door; minor alterations to core area	sum	1	1	£ 25,000	£ 25,000	
Sub-division of Unit 10 to form 3 Units; assumes sub-division of services, etc. Improvements to interior lighting	m2	460	460	£ 1,030	£ 473,800	
						£ 1,386,300
External Works						
General Siteworks forming access road, car parking, etc.	m2	1000	1,000	£ 100	£ 100,000	
Drainage						
General Allowance for SUDS, rainwater, FW sewers, etc.	m2	300	300	£ 75	£ 22,500	
E.O. for stormcell attenuation, etc.	sum	1	1	£ 20,000	£ 20,000	
External Services						
SSE	sum	1	1	£ 65,000	£ 65,000	
BT	sum	1	1	£ 5,000	£ 5,000	
Water	sum	1	1	£ 10,000	£ 10,000	
						£ 222,500
				Sub-Total Construction Costs		£ 1,608,800
				Main Contractor Prelims	15%	£ 241,320
						£ 1,850,120
				Main Contractor Fee	7%	£ 129,508
				Employer Risk, *Say*	5%	£ 98,981
				ESTIMATED CONSTRUCTION COSTS		£ 2,078,610
				Design Team Fees	10.0%	£ 207,861
				Prime Consultant Fees - All Stages	[3.1% + NM]	£ 69,437
				Building Warrant Fees		£ 7,603
				Planning Fee		£ 2,100
				ESTIMATED TOTAL COST		**£ 2,365,611**

Notes:

1. Base date of Order of Cost - July, 2023
2. All costs are based on rates with allowances included for open tendering during **'Fourth Quarter 2023'** from Main Contractors, incorporating a NEC4 ECC Option A contract. Should the timescale for commencing construction works be more longer term then allowances in line with BCIS TPI should be made for inflation.
3. This Cost is based on outline scope and discussions with HIE. The Cost assumes a serviced site on the Enterprise Park, Forres is available, i.e. no allowance for roads, services, etc. outwith plot boundary.
4. This Cost **includes** the following;
   - i Professional Fees
   - ii Building Warrant costs.
   - iii Planning Fee
5. This Cost **excludes** the following;
   - i Office desks, chairs, storage units and the like.
   - ii Office cupboards, general shelving, loose fittings / furniture / FF&E
   - iii Professional Fees in respect of the works.
   - iv Value Added Tax (s*ee note below)*

   Note: In relation to buildings VAT is a complex area. Therefore, it is recommended that specialist advice is sought on VAT matters to ensure that the correct rates are applied to the various aspects of a building project.



TENDER PRICE UPLIFT

HIGHLANDS AND ISLANDS ENTERPRISE

FORRES ENTERPRISE PARK, MORAY
21st JULY, 2023

Item	Unit	Gross Area	Total	£/m2		Sub-Totals
		Tender Price Index		Adjustment		
3rd Qtr. 2023		387				
3rd Qtr. 2024		404		+ 4.39%		
3rd Qtr. 2025		418		+ 3.47%		
3rd Qtr. 2026		429		+ 2.63%		
3rd Qtr. 2027		450		+ 4.90%		

TP Recommendation :-

While the above is based on BCIS forecast information, we have seen changes in the local construction market that are not fully reflected in the UK wide BCIS indices. For budgeting purposes we would suggest it would be prudent to allow in the order of 5-7% per annum uplift to reflect likely changes in the local market conditions.

Appendix 8: Capital works – contract template

Contract Documents

INDEX

13	APPENDIX I –	WORKS PROGRAMME
14	APPENDIX J –	[DESIGN INFORMATION – [ ]]
15	APPENDIX K –	[DESIGN INFORMATION – DRAWINGS]
16	APPENDIX L –	[SURVEY REPORTS]
17	APPENDIX M –	[PLANNING PERMISSION]
18	APPENDIX N –	[ROAD CONSTRUCTION CONSENT]
19	APPENDIX O –	[BIM]
20	APPENDIX P –	PERFORMANCE BOND
21	APPENDIX Q –	COLLATERAL WARRANTY AGREEMENTS
22	APPENDIX R –	PARENT COMPANY GUARANTEE
23	APPENDIX S –	GENERAL HIE SCOPE
24	APPENDIX T –	GENERAL HIE SITE INFORMATION
25	APPENDIX U –	COLLUSIVE TENDERING
26	APPENDIX V –	CANVASSING
27	APPENDIX W –	LEGAL AGREEMENTS
28	APPENDIX X –	[PROJECT SPECIFIC INFORMATION]
29	APPENDIX Y –	ITT CLARIFICATIONS
30	APPENDIX Z-	[COVID-19 ALLOWABLE COSTS SCHEDULE]

1 FORM OF TENDER

The *works are* **[INSERT]**

TENDER

To

Highlands & Islands Enterprise (the *Client*)

Address

An Lòchran,
10 Inverness Campus,
Inverness,
IV2 5NA

We offer to Provide the Works in accordance with the Contract Data part one and the attached Contract Data part two for a tendered total of the Prices of [£] in accordance with the *conditions of contract.*

You may accept this offer on or before [INSERT] (per A30/190).

Yours faithfully,

Signed .....

Name .....

Position .....

On behalf of ..... (the *Contractor*)

Address .....

.....

.....

Date .....

2 FORM OF AGREEMENT

This agreement is made on the ……. day of …….....20[ ]..... between

Highlands and Islands Enterprise established under the Enterprise and New Towns (Scotland) Act 1990 and having its principal office at An Lòchran, 10 Inverness Campus, Inverness, IV2 5NA

and

.....

..... (the *Contractor*)

The *Client* wishes to have the following *works* provided:

[INSERT]

1. The *Contractor* will Provide the Works in accordance with the *conditions of contract* identified in the Contract Data and shall fulfil its other obligations arising out of this contract.

2. The *Client* will pay the *Contractor* the amount due and carry out his duties in accordance with the *conditions of contract* identified in the Contract Data.

3. The documents forming part of this agreement are:

    - the *Contractor's* tender
    - the *Client's* letter of acceptance
    - *conditions of contract* (NEC4 Engineering and Construction contract, Main Option A, June 2017 with Amendments January 2019 and October 2020) as amended by Appendix A – Amendments to the NEC4 Engineering and Construction Contract
    - the Contract Data part one [including]

        a. **Appendix A – Amendments to the NEC4 Engineering and Construction Contract**
        b. **Appendix B – Scope**
        c. **Appendix C – Site Information**
        d. **Appendix D –Client's Early Warning Register**
        e. **Appendix E – Pre Construction Health & Safety Information Pack**
        f. **Appendix J – [Design Information – [ ]]**
        g. **Appendix K – [Design Information – Drawings]**
        h. **Appendix L – [Survey Reports]**
        i. **Appendix M – [Planning Permission]**
        j. **Appendix N – [Road Construction Consent]**

k. **Appendix O – [BIM]**
l. **Appendix P – Performance Bond**
m. **Appendix Q – Collateral Warranty Agreements**
n. **Appendix R – Parent Company Guarantee**
o. **Appendix S – General HIE Scope**
p. **Appendix T – General HIE Site Information**
q. **Appendix U – Collusive Tendering**
r. **Appendix V – Canvassing**
s. **Appendix W – Legal Agreements**
t. **Appendix X – [Project Specific Third Party information]**
u. **Appendix Y – ITT Clarifications**
v. **Appendix Z – [Covid-19 Allowable Costs Schedule]**

- the Contract Data part two [including]

a. **Appendix F – Activity Schedule: Tender Total of the Prices (including Cash Flow Projection)**
b. **Appendix G – BCIS Elemental Cost Analysis, Tender Return Cost Summary and Elemental Cost Build-up (showing rates and prices)**
c. **Appendix H – Contractors Early Warning Register**
d. **Appendix I – Works Programme**

- the following documents:
  a. **[ ]**

and in the event of a conflict between the requirements set out in this Article 3 the requirements have precedence in numerical order in this Article 3, except where specifically provided otherwise in this contract. The requirements within the documents comprised in the Scope as regards the scope or extent of the *works* are where possible to be interpreted as complementary but in the event of a conflict that which describes a greater extent or scope of works takes precedence.

4. Governing Law

a. The formation, existence, construction, performance, validity and all aspects whatsoever of this agreement or any term of it (including non-contractual disputes or claims) shall be governed by the laws of Scotland.
b. The courts of Scotland shall have exclusive jurisdiction to settle any disputes (including non-contractual disputes or claims), which may arise out of or in connection with this agreement. The parties irrevocably agree to submit to that jurisdiction.

Signed by

Name [printed] .....

Position .....

On behalf of (*Client*) .....

Witness Signature .....

Witness Name ……...

Address .....

.....

Date ……

and

Signed by …….

Name [printed] .....

Position .....

On behalf of (*Contractor*).....

Witness Signature .....

Witness Name ……...

Address .....

……

Date .....

3 CONTRACT DATA – PART ONE

Part one – Data Provided by the Client

Statements given in all contracts

1. **General**

The *conditions of contract* are the core clauses and the clauses for the following main Option, the option for resolving and avoiding disputes and secondary options of the NEC4 **A** Engineering and Construction Contract June 2017 (with January 2019 and October 2020 amendments) as amended by the terms of Part A of the Appendix to this letter

Main Option	A
Option for resolving and avoiding disputes	W2
Secondary Options	[X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15, X16, X17, X18, X20, X21,Y(UK)1] [DELETE WHERE APPROPRIATE] Y(UK)2 and Z

The *works* are **[INSERT]**

The *Client* is

Name	**Highlands & Islands Enterprise**
Address for communications	**An Lòchran,** **10 Inverness Campus,** **Inverness,** **IV2 5NA**
Address for electronic communications	[INSERT]

The *Project Manager* is

Name	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]

The *Supervisor* is

Name	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]

The Scope is in **Appendices [INSERT]**

The Site Information is in **Appendices [INSERT].**

The *boundaries of the site* are **Specified in [INSERT].**

The *language of this contract* is **English**

The *law of the contract* is the law of **Scotland and subject to the jurisdiction of the Courts of Scotland.**

The *period for reply* is **[INSERT]** weeks except that

The *period for reply for*		is
The *period for reply for*		is
The *period for reply for*		is

The following matters will be included in the Client's Early Warning Register**:**

[INSERT]	

Early Warning meetings are to be held at intervals of no less than [**INSERT**]

2. **The *Contractor's* main responsibilities**

The *key dates* and *conditions* to be met are

Condition to be met	*Key date*
[**INSERT**]	

3. **Time**

The *starting date* is **[INSERT]**

The *access dates are*

Part of the Site	date
[**INSERT**]	

The *Contractor* submits revised programmes at intervals no longer than [**INSERT**].

If the *Client* has decided the *completion* date for the whole of the *works*

The *completion* date for the whole of the *works* is [**INSERT**]

Taking over the works before the Completion Date

The *Client* **is / is not** willing to take over the *works* before the Completion Date (**Delete as applicable**)

If no programme is identified in part two of the Contract Data

The period after the Contract Date within which the *Contractor* is to submit a first programme for acceptance is [**INSERT**]

4. **Quality Management**

The period after the Contract Date within which the *Contractor* is to submit a quality policy statement and quality plan is [INSERT]

The period between completion of the whole of the *works* and the defects date is [**INSERT**]

The *defect correction period is* [**INSERT**] weeks except that

The *defect correction period* for		is
The *defect correction period* for		is
The *defect correction period* for		is

5. **Payment**

The *currency of this contract* is the **Pounds Sterling (£)**

The first assessment date is **[INSERT]**

The *assessment interval* is [**the period between the last assessment date and the last working day of the preceding month/[INSERT].**

The *interest rate* is **[INSERT]%** per annum above the base rate of the [**Bank of England/INSERT].**

6 **Compensation events**

The place where weather is to be recorded is: **[INSERT]**

The *weather measurements* to be recorded for each calendar month are

- The cumulative rainfall (mm)
- The number of days with rainfall more than 5mm
- The number of days with minimum air temperature less than 0 degrees Celsius
- The number of days with snow lying at **[INSERT]**hours GMT

And these measurements: **[INSERT]**

The *weather measurements* are supplied by: **[INSERT]**

The *weather* data are the records of past weather measurements for each calendar month which were recorded at **[INSERT]**and which are available from the **[INSERT]**

Where no recorded data are available

Assumed values for the ten year weather return *weather data* for each *weather measurement* for each calendar month are [INSERT]

If Option A or B is used

The *value engineering percentage* is 50% unless another percentage is stated here, in which case it is 100%

If there are additional compensation events

These additional compensation events [INSERT]

8 Liabilities and insurance

If there are additional *Client's* liabilities

These are additional *Client's* liabilities [INSERT]

The minimum limit amount of cover for insurance against loss of or damage to property (except the *works*, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor)* arising from or in connection with the *Contractor* Providing the Works for any one event is [**INSERT**]**.**

The minimum amount of cover for insurance against death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with the contract for any one event is **[INSERT].**

If the *Client* is to provide Plant and Materials

The insurance against loss of or damage to the *works* Plant and Materials is to include cover for Plant and Materials provided by the *Client* for an amount of [**INSERT**]

If the *Client* is to provide any insurances stated in the Insurance Table

The *Client* provides these insurances from the Insurance Table:

1 Insurance against	[**INSERT**]
Minimum amount of cover is	
The deductibles are	
2 Insurance against	
Minimum amount of cover is	
The deductibles are	

If additional insurances are to be provided

The *Client* provides these additional insurances

1 Insurance against	[**INSERT**]
Minimum amount of cover is	
The deductibles are	
2 Insurance against	
Minimum amount of cover is	
The deductibles are	

The *Contractor* provides these additional insurances

1 Insurance against	[**INSERT**]
Minimum amount of cover is	
The deductibles are	
2 Insurance against	
Minimum amount of cover is	
The deductibles are	

Resolving and avoiding disputes

The *tribunal* is [**INSERT**]

If the *tribunal* is arbitration

The arbitration procedure is [**INSERT**]

The place where the arbitration is to be held is [**INSERT**]

The person or organisation who will choose an arbitrator if the Parties cannot agree a choice or if the *arbitration procedure* does not state who will choose an arbitrator is [**INSERT**]

The Senior Representatives of the *Client* are

Name (1)	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]
Name (2)	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]

The Adjudicator is

Name	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]

The Adjudicator nominating body is [INSERT]

X1: Price adjustment for inflation (used only with options A, B, C and D)

If Option X1 is used

The proportions used to calculate the Price Adjustment Factor are [INSERT]

0. linked to the index for [INSERT]

0.

0.

0.

0.

0.

0. non-adjustable

1.00

The base date for indices is [INSERT]

These indices are [INSERT]

X3: Multiple Currencies (used only with Options A and B)

If Option X3 is used

The *Client* will pay for the items or activities listed below in the currencies stated

items and activities	other currency	total maximum payment in the currency

The *exchange rates* are those published in [INSERT]

on [INSERT] (date)

X5: Sectional Completion

If Option X5 is used

The *completion date* for each section of the *works* is

section	description	*completion date*

X6: Bonus for Early Completion

If Option X6 is used without Option X5

The bonus for the whole of the works is [INSERT] per day

If Option X6 is used with Option X5

The bonus for each *section* of the works is

section	description	amount per day
(1)		
(2)		
(3)		
(4)		
The bonus for the remainder of the *works* is		

X7: Delay Damages

If Option X7 is used without Option X5

Delay damages for Completion of the whole of the works are [INSERT] per day

If Option X7 is used with Option X5

section	description	amount per day
1		
2		
3		

The delay damages for the remainder of the *works* are [INSERT] per day

X8: Undertakings to the *Client* or Others

N/A - See Z clauses

X10: Information modelling

If Option X10 is used

If no *information execution plan* is identified in part two of the Contract Data

The period after the Contract Data within which the *Contractor* is to submit a first Information Execution Plan for acceptance is [INSERT].

The minimum amount of insurance cover for claims made against the *Contractor* arising out of its failure to use the skill and care normally used by professional's providing information similar to the Project Information is, in respect of each claim [INSERT].

The period following Completion of the whole of the works or earlier termination for which the *Contractor* maintains insurance for claims made against it arising out of its failure to use the skill and care is [INSERT].

X12: Multiparty Collaboration

If Option X12 is used

The *Promoter* is [INSERT]

The Schedule of Partners is in [INSERT]

The *Promoter's objective* is [INSERT]

The Partnering Information is in [INSERT]

X13: Performance bond

If Option X13 is used

The amount of the performance bond is **an amount equal to [10% of the Tendered Total of the Prices/INSERT]**

X14: Advance payment to *Contractor*

If Option X14 is used

The amount of the advanced payment is [INSERT]

The period after the Contract Date from which the *Contractor* repays the instalments in assessments is [INSERT]

The instalments are [INSERT] (either an amount or a percentage of the payment otherwise due)

An advanced payment bond [is/is not] required (delete as applicable)

X15: The *Contractor's* design

If Option X15 is used

The *period for retention* following Completion of the whole of the *works* or earlier termination is [INSERT]

The period following Completion of the whole of the *works* or earlier termination for which the Contractor maintains insurance for claims made against it arising out of its failure to use the skill and care is [**12 years / INSERT**]]

X16: Retention

If Option X16 is used

The *retention free* amount is [**INSERT**]

The *retention* percentage is [**INSERT%**].

Retention bond the *Contractor* **may/may** not give the *Client* a retention bond (**delete as applicable**)

X17: Low performance damages

If Option X17 is used

The amounts for low performance damages are

amount		*performance level*
	for	
	for	
	for	
	for	

X18: Limitation of liability

If Option X18 is used

The *Contractor's* total liability to the *Client* for all matters arising under or in connection with this contract, other than excluded matters, is limited to: Unlimited

The *end of liability* date is **[12 / INSERT]** years after the Completion of the whole of the *works.*

X20: Key Performance Indicators

If Option X20 is used

The *incentive schedule* for Key Performance Indicators is in [INSERT]

A report of performance against each Key Performance Indicator is provided at intervals of [INSERT] months.

YUK(1): Project Bank Account

Charges made and interest paid by the *project bank*
The Contractor [is/is not] to pay any charges made and to be paid any interest paid by the *project bank* (Delete as applicable)

YUK(2): The Housing Grants, Construction and Regeneration Act 1996

If Option YUK(2) is used and the final date for payment is not 14 days after the date on which payment becomes due

The period for payment is [**INSERT**] days after the date on which payment becomes due.

Z: Additional conditions of contract - See appendix A

4 CONTRACT DATA – PART TWO

1 General

The *Contractor* is

Name	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]

The *fee percentage* is [INSERT]%

The *working areas* [INSERT]

The key persons are

1 Name	[INSERT]
Job	
Responsibilities	
Qualifications	
Experience	
2 Name	[INSERT]
Job	
Responsibilities	
Qualifications	
Experience	
3 Name	[INSERT]
Job	
Responsibilities	
Qualifications	
Experience	

The following matters will be included in the Early Warning Register: [INSERT]

2 The *Contractor's* main responsibilities

If the *Contractor* is to provide scope for its design

The Scope provided by the *Contractor* for its design is in [**INSERT**]

3 Time

If a programme is to be identified in the Contract Data

The programme identified in the Contract Data is [**INSERT**]

If the Contractor is to decide the *completion date* for the whole of the *works*

The *completion date* for the whole of the *works* is [**INSERT**]

5 Payment

If Option A or C is used

- The *activity schedule* is in **[INSERT]**.

If Option A, B, C or D is used

- The tendered total of the Prices is as detailed in [**INSERT**]

6 Resolving and avoiding disputes

The Senior Representatives of the *Contractor* are

Name (1)	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]
Name (2)	[INSERT]
Address for communications	[INSERT]
Address for electronic communications	[INSERT]

X10: Information modelling

If Option X10 is used

If an *information execution plan* is to be identified in the Contract Data

The *information execution plan* identified in the Contract Data is [**INSERT**]

Y(UK)(1): Project Bank Account

If Option Y(UK)1 is used

The *project bank* is [INSERT]

named suppliers are [INSERT]

Data for the Short Schedule of Cost components

The people rates are

Category of person	unit	rate
[**INSERT**]		

The published list of Equipment is the edition current at the Contract Date of the list published by [**INSERT**]

The percentage for adjustment for Equipment in the published list is [**INSERT**] % (state plus or minus).

The rates for other Equipment are

Equipment	Rate
[**INSERT**]	

The rates for Defined Cost of manufacture and fabrication outside the Working Areas by the Contractor are

Category of person	rate
[**INSERT**]	

The rates for Defined Cost of design outside the Working Areas are

Category of employee	rate
[**INSERT**]	

The rates for Defined Cost of design outside the Working Areas are

Category	rate
[**INSERT**]	

5 APPENDIX A - AMENDMENTS TO THE NEC4ENGINEERING AND CONSTRUCTION CONTRACT JUNE 2017 (WITH AMENDMENTS JANUARY 2019 AND OCTOBER 2020)

The terms of the NEC4 Engineering and Construction Contract June 2017 (with amendments January 2019 and October 2020) shall be amended as follows:

Clause 11.2 (5)

Insert at the end of this clause:

"A Corrupt Act is also if the *Contractor* does any of the following:

- is convicted or has been convicted of a criminal offence relating to the conduct of its business or profession
- commits or is found to have committed an act of grave misconduct in the course of its business or profession
- fails or has failed to comply with any obligations relating to the payment of any taxes or social security contributions
- has made any serious misrepresentations in the tendering process for any project or matter in which the public sector has or had a significant participation
- fails to obtain any necessary licences or to obtain or maintain membership of any relevant body, or
- substantially changes its corporate structure or otherwise changes its legal form or there is a change of control as defined by section 450 of the Corporation Tax Act 2010 (any such case being a "Change of Control") and such a Change of Control gives the *Employer* reasonable grounds for concern regarding the new entity's financial standing, ability to Provide the Works and/or security issues
- commits any breach of any Law including, without limitation, (i) any breach of the Employment Relations Act 1999 (Blacklists) Regulations 2010 or section 137 of the Trade Union and Labour Relations (Consolidation) Act 1992; and (ii) any breach of the Data Protection Act 1998 by unlawfully processing personal data in connection with any blacklisting activities
- offers to give or agrees to give any person any gift or consideration of any kind as an inducement or reward for doing, forbearing to do, or for having done or forborne to do any act in relation to the obtaining or execution of this contract or any other contract for the *Client* or Her Majesty's Service or for showing favour or disfavour to any person in relation to this or any other contract for the *Client* or Her Majesty's Service
- enters into this contract or any other contract with the *Client* or with a person or body employed by the *Client* or acting on its behalf or with Her Majesty's Service in connection with which commission has been paid or agreed to be paid by him or on his behalf, or to his knowledge, unless before this contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the *Employer*, or

- commits an offence under the Bribery Act 2010 in relation to this contract or any other contract with the *Client* or Her Majesty's Service"

Clause 11.2(35)

Insert new clause as follows:

"Elemental Build Up is the Elemental Build Up provided in [**INSERT**]."

Clause 11.2(36)

Insert new clause as follows:

"Project Documents" mean any agreements that the *Client* may at any time enter into with a third party in relation to the *works* and/or the Site or other agreements that are relevant to the *works* or the Site including those referred to at Clause Z18 (the terms of which shall be deemed to be within the *Contractor*'s knowledge) and any method statements referred to in the aforementioned agreements;

Clause 11.2(37)

Insert a new clause as follows:

"Necessary Consents are the planning permissions, road construction consents, building warrants and any other permissions, warrants, approvals, consents, licences and the like which may be necessary from any statutory body or authority; any utility company or any other person to enable the *works* to be carried out."

Clause 11.2.(38)

Insert a new clause as follows:

"Applicable Law means (i) any statute, law, order, regulation, by-law, statutory instrument, decision, rule, consent or delegated or subordinate legislation or any legislative act of the Westminster or Scottish Parliaments, Council of the European Union or the European Commission which has legal effect with regard to this contract, the *works*, the Site or the parties' rights and obligations, or any modification, supplement, amendment or replacement of any of the forgoing having the force of law; and (ii) the Necessary Consents obtained and to be obtained to carry out the *works*. All references in this contract to "applicable laws" shall be to Applicable Law."

Clause 11.2(39)

Insert a new clause as follows:

"CDM Regulations means the Construction (Design and Management) Regulations 2015, together with any guidance or codes of practice issued thereon by the Health and Safety Executive."

Clause 11.2(40)

Insert a new clause as follows:

"Subconsultant means a person or organisation who has a contract with the *Contractor* to design part of or provide services in connection with the *works*."

Clause 11.2(41)

Insert a new clause as follows:

"COVID-19" means COVID-19 disease/SARS-COVID-2 virus.

Clause 11.2(6)

Amend clause 11.2(6) second bullet by replacing “applicable law” with “Applicable Law”.

Clause 12.5

Insert a new clause as follows:

“Save to the extent that the context or the express provisions of this Agreement require otherwise, in this Agreement:

any phrase introduced by the words "including", "include", "in particular" or any similar expression shall be construed as illustrative only and shall not be construed as limiting the generality of any preceding words;

the words "other" and "otherwise" shall not be construed ejusdem generis with any foregoing words where a wider construction is possible;”

Clause 17.1

Delete Clause 17.1 and replace it with the following:

“The *Contractor* checks the Scope upon receipt or production by the *Contractor*. The *Project Manager* or the *Contractor* notifies the other as soon as either becomes aware of any conflict, ambiguity, discrepancy, error, omission, inadequacy, divergence or inconsistency in or between or amongst any requirements of this contract (including the Scope and Site Information) and any Applicable Law or Necessary Consents. The *Project Manager* gives an instruction resolving the conflict, ambiguity, discrepancy, error, omission, inadequacy, divergence or inconsistency. The *Contractor* shall not be entitled to a compensation event as a result of any such conflict, ambiguity, discrepancy, error, omission, inadequacy, divergence or inconsistency unless the *Project Manager* gives an instruction changing the Scope to correct an error or omission in the Scope supplied by the *Client*."

Clause 20

Insert at the end of clause 20.1:

“, this contract, the Necessary Consents and Applicable Law and approvals from Others and in a proper and workmanlike manner with new materials which are suitable for their purposes and in accordance with Applicable Law. The *Contractor* proceeds regularly and diligently with the *works*.

Clause 21

Add the following new clauses:

“21.4 The *Contractor* shall not, unless specifically instructed to do so and the *Contractor* has advised the *Project Manager* in writing that the material is prohibited under this clause, specify or approve for use,

any prohibited material or product for use in relation to the *works* and does not authorise or approve the specification or use by others of any products or materials not in conformity with relevant British or European Standards or Codes of Practice or which at the time of use are widely known to builders or designers of the relevant discipline within the United Kingdom to be deleterious to health and safety or to the durability of buildings and/or other structures and/or finishes and/or plant and machinery or any parts of them in the particular circumstances in which they are used.

21.5 If, in the performance of its obligations under this contract, the *Contractor* becomes aware that it or any other person has specified or used or authorised or approved the specification or use by others of any such products or materials as are referred to in clause 21.4 the *Contractor* notifies the *Project Manager* in writing forthwith.

21.6 The *Contractor*, warrants that the design of the *works* has been prepared and will be prepared in accordance with all the reasonable skill, care and diligence to be expected of a competent and appropriately qualified engineer or architect or, if relevant, other appropriately qualified designer experienced in exercising such responsibilities in relation to work of the same type, complexity, value and timescale as the *works* and for a site of a similar location, nature and size as the Site in exercising its responsibilities and that the *Contractor* exercises (and warrants that it has exercised) all the reasonable skill, care and diligence to be expected of a competent and appropriately qualified engineer or architect or, if relevant, other appropriately qualified designer experienced in exercising such responsibilities in relation to work of the same type, complexity, value and timescale as the *works* and for a site of a similar location, nature and size as the Site.

21.7 The *Contractor* provides continual supervision of the *works* and performs and provides everything necessary for the organisation and co-ordination of the *works*."

Clause 26.3

Insert at the end of the clause:

"The *Contractor* provides the *Project Manager* with certified true copies of subcontracts entered into between the *Contractor* and any Subcontractors (including Subconsultants) in connection with the *works* as required by the *Project Manager*."

Clause 27.5

Insert a new Clause 27.5

"The *Contractor* is responsible for obtaining all Necessary Consents (subject to clause Z18) insofar as the same have not already been obtained at the Contract Date and for complying with all conditions pertaining to the Necessary Consents (whether procured before or after the Contract Date)."

Clause 29A

Insert a new Clause 29A as follows:

"Covid-19

29A.1 Notwithstanding any other provision in this contract, the Parties acknowledge the existence of COVID-19 and the considerable measures that, at the date of this contract, have been brought into effect by countries across the world to seek to address the risks and challenges posed by COVID-19.

29A.2 The *Contractor* confirms that:

- prior to entering into this contract it has evaluated fully every aspect of the possible impact of COVID-19 on its obligations under this contract taking into account the latest understanding and Scottish Government legislation and/or guidance in respect of COVID-19 and its impact as at the Contract Date, including but not limited to:
  - the supply of labour and materials
  - the impact of the wide-ranging measures taken by governments to address the risks and challenges posed
  - any other issues arising from COVID-19 that may impact on its ability to discharge its obligations under this contract,

  and has taken all appropriate measures to ensure that it can fulfil its obligations under and in accordance with this contract and

- no failure on the part of the *Contractor* to take into account that impact at the Contract Date entitles the *Contractor* to a change in the Prices, the Completion Date and the Key Dates."

Clause 33.1

Replace the word "The" at the start of the clause with "Subject to the other provisions of this clause 33.1 and any constraints set out in the Scope , the"; and insert a new sentence at the end "Access to and use and of the Site shall be subject to the constraints and phasing provisions referred to in the Contract including Key Dates, Contract Data Part 1 and Scope. "

Clause 50.1

Delete the existing second sentence and insert:

"The first assessment date is the date prescribed within the Contract Data Part 1."

Clause 50.2

After the words "Project Manager" in line 1, insert "not less than seven days"

Clause 60.1

Delete “The” at the beginning of the clause and replace with:

“Save to the extent that (a) such events are not consequent upon or necessitated by any act, negligence, omission, default, breach of contract or breach of statutory duty of the *Contractor*, its sub-contractors or suppliers or those for whom it is responsible whether arising out of or in connection with this contract or otherwise; (b) subject to any provision to the contrary in this contract; and (c) save to the extent the *Contractor* is stated to be responsible for or assumed the risk of or for or to have allowed for such matters), the”

Clause 60.1(20)

Delete the clause.

Clause 60.1(22)

Insert a new clause as follows:

“60.1(22) the resurgence of COVID-19 and/or other similar virus and/or notifiable disease resulting in the implementation of new or further (i) public health measures (whether in the form of guidance or legislation) and/or (ii) construction industry specific health and safety guidance and/or legislation after the Contract Date which stops the Contractor completing the whole of *works* by the date shown on the Accepted Programme“

Clause 60.1(23)

Insert a new clause as follows:

“60.1(23) a change in or the imposition of additional taxes, duties, tariffs, levies, fees and/or customs charges on Plant and Materials or Equipment imported in the United Kingdom from the European Union ("Imported Plant and Materials") arising as a direct result of the passing of the European Union (Withdrawal Agreement) Act 2020 and/or any delay and/or disruption to the importation of Imported Plant and Materials (or any component part thereof) into the United Kingdom (including, but not limited to, the passing through HM Customs and Excise), which is incurred after the UK Withdrawal Date, but which is not as a result of any act or omission of the *Contractor*, but only to the extent the *Contractor* takes reasonable steps to mitigate the effects of such implications on the Works and/or the Completion Date and/or the Prices. For the purpose of this clause 60.1(23) "UK Withdrawal Date" means 31st December 2020 or after the UK Withdrawal Date from the European Union.”

Clause 61.8

Insert a new clause as follows

“61.8 The Parties agree that for

- compensation events arising under clause 60.1(4) where the reason for the instruction is the resurgence of COVID-19 and/or other similar virus and/or notifiable disease resulting in the implementation of new or further public health measures after the Contract Date in connection therewith; and/or

- compensation events arising under 60.1(22)

any changes to the Prices are assessed in accordance with clause 63.1A"

Clause 62.2

Insert at the end of the clause:

"As part of the quotation, the *Contractor* submits a revised Elemental Build Up (with any changes to the previous version of the Elemental Build Up being highlighted) to show any change to the build up of the Total of the Prices."

Clause 63.1

Delete the clause and insert:

"The changes to the Prices are assessed as the effect of the compensation event on the relevant component costs within the Elemental Build Up and the resulting Fee."

Insert new clause 63.1A

"63.1A Notwithstanding any other provision of this contract, any changes to the Prices for the compensation events referred to in clause 61.8 are assessed in accordance with clause 63.1 but the Contractor acknowledges that the changes to the Prices are restricted to the heads of recoverable cost set out in [the Covid-19 Allowable Costs Schedule]."

Clause 63.3

Delete the clause.

Clause 63.9

Delete the words "Defined Cost and"

Clause 63.10

Insert at the start of the clause "Without prejudice to clause 17.1,".

Clause 63.14

At the end of the clause insert:

"The change to the Price for each affected activity is calculated as follows:

(1) where the Elemental Build Up contains a relevant rate, that rate is applied to any change in quantities and the Price of the activity is adjusted accordingly;

(2) where there is no rate within the Elemental Build Up, the *Project Manager* either:

(a) instructs the *Contractor* to carry out such competitive tender exercise as the *Project Manager* deems appropriate (having regard to the relative value and importance of the activity) to

establish a price for any work required that is additional to the *works* within the activity set out in the Scope and the price for the activity shall be adjusted accordingly;

(b) negotiates and agrees with the *Contractor* a lump sum in respect of the change to the Price; or

(c) does any combination of the actions referred to in paragraphs (a) or (b) above as the *Project Manager* deems appropriate to assess the change to the Price."

Clause 90.2

At the Termination Table set out in clause 90.2, insert:

"or R23"

next to the second instance of "R21" in the first row of the table under 'Reason' column.

Clause 91.6

Insert the following at the end of the third bullet point under clause 91.6 before "(R20)":

"provided that where the reason for the instruction is the resurgence of COVID-19 disease/ SARS-COVID-2 virus and/or other similar virus and/or notifiable disease resulting in the implementation of new or further public health measures in connection therewith after the Contract Date, the *Contractor* may not terminate"

Clause 91.7

Insert the following after the fourth bullet point under clause 91.7 but before "(R21)":

*"*or

- Is attributable to the resurgence or Covid-19 disease/ SARS-COVID-2 virus and/or other similar virus and/or notifiable disease resulting in the implementation of new or further public health measures in connection therewith after the Contract Date"

Clause 91.9

Insert new clause 91.9 as follows:

"91.9 The *Client* may terminate where the assessment (or cumulative assessment) of delay in respect of a compensation event 60.1(22) exceeds **[INSERT months]** (R23)"

Option Clause X2

Where secondary option X2 (Change in Law) is selected to apply:

Insert the following at the end of clause X2.1:

*"*Notwithstanding any other provision of this contract where the change in the law of the country in which the Site is located occurs as a direct result of the resurgence of COVID-19 disease/ SARS-COVID-2 virus and/or other similar virus and/or notifiable disease any change to the Prices is assessed in accordance with clause 63.1A the Contractor's only entitlement to relief in terms of a change to the Prices and/or a delay to the Completion Date or any Key Date is in terms of clause 60.1(22)."

"The *Contractor* notifies the *Project Manager* of a compensation event for a change in the law in accordance with Clause 61.3."

Option Clause X4

Where secondary option X4 is selected to apply:

Insert new clause X4.3 as follows:

"X4.3 If the guarantee was not given to the *Client* within 4 weeks of the Contract Date, 20% of the Price for Work Done to Date is retained in assessments of the amount due until the guarantee is given to the *Client*."

Option Clause X15

Where secondary option X15 is selected to apply:

Delete existing clause X15.1 and insert the following:

"X15.1 The *Contractor* is not liable for Defects in the *works* due to his design so far as he proves that he has used the level of skill and care set out in clause 21 of this contract, in the carrying out of such design."

Delete clause X15.5

Option Clause X18

Where secondary option X18 is selected to apply:

DELETE X18.2, X18.3 and X18.4.

In X18.5, DELETE "as stated in the contract" in line five, and after the final bullet point, ADD new bullet points as follows:

- "fraud, gross negligence, wilful misconduct, wilful default, or breach of statutory duty or of Applicable Law, on the part of the *Contractor*,
- loss of or damage to third party property
- bodily injury to or death of a person
- any matter which is or should be covered by the insurances to be taken out and maintained by the *Contractor* pursuant to clause 83 (that is, whether or not the insurance policy/policies respond) and save for the professional indemnity insurance required by clause Z15; and
- the carrying out and completion of the *works*, including the cost of remedying any Defects; "

The following new clauses shall be inserted:

Z1.	Communications from the *Client*	The *Contractor* accepts communication from the *Client* only from the *Project Manager* and the *Supervisor*.
Z2.	Verbal communications	The *Contractor* seeks written confirmation of any verbal communication that he considers to give rise to a compensation

		event before acting on such communication, unless to avoid imminent death, injury or loss or damage to property.
Z3.	Method of Working	The *Contractor* accepts the risk of any method of working proposed by him or contained in the Scope. The impossibility of any method of working placed at the *Contractor's* risk and any alternative work to avoid the impossibility are not compensation events.
Z4.	Assignation	The *Contractor* does not assign the whole or any part of or any benefit or interest in the contract including any monies due or becoming due to the *Contractor* unless the *Client* (in its absolute discretion) consents to such assignation. The *Client* may at any time and from time to time assign in whole or in part its rights and remedies arising out of or in connection with this contract without the *Contractor's* consent.
Z5.	Works done before the *starting date*	The *Contractor* agrees and acknowledges that the provisions of the contract apply to all design, services, work and other activities carried out by the *Contractor* in respect of the *works* regardless of whether such design, services, work and other activities is carried out prior to the *starting date*.
Z6.	Not used	
Z7.	Applications for payment	The *Contractor* provides with each application for payment details of how the sum applied for is made up and such evidence of entitlement and value as is prescribed in this contract or in an instruction or, otherwise, as the *Project Manager* reasonably requires. The *Project Manager* need not certify any sum for which the required details or evidence are not provided, and, notwithstanding clauses 51.3 and 51.4, no interest attaches to the difference between the sum assessed by the *Project Manager* and any greater sum found due after submission of the required details or evidence.
Z8.	Status of certification by *Project Manager*	The assessment and certification by the *Project Manager* and payment of any sum by the *Client* is not an admission of liability or value or a waiver of any right and may be re-opened and corrected by the *Project Manager* at any time prior to the *defects date*.
Z9.	Deduction/ Set-Off	The *Client* may deduct or set-off against any monies due to the *Contractor* any sums that the *Contractor* is liable to pay to the *Client* arising out of or connected with the contract or any other

		contract between them or in delict. If the sum is unascertained or the matter is disputed the *Client* or its representative, acting reasonably having regard to all the circumstances, estimates the sum.
Z10.	Deduction in respect of Tax	The *Client* may withhold from payment sums on account of the *Contractor's* actual or potential liability for taxation as required under the statutes and regulations in force. As a condition precedent to receiving payment without deduction under this sub-clause, the *Contractor* provides such tax details and certificates as the law prescribes or the *Client* reasonably requires.
Z11.	Notification of Compensation Events	Where the *Contractor* or the *Project Manager* intends to notify a compensation event they notify that compensation event in a written notice headed "Notification of Compensation Event". Such notice issued is a document separate from other correspondence or other documentation issued by that party. The compensation event being notified is clearly identified and described within that notice.
Z12.	Keeping of records prior to acceptance of a compensation event	Until such time as a quotation is accepted in respect of a compensation event, the *Contractor* keeps a daily record of labour, Plant and Materials and Equipment expended by him in carrying out the instruction and submits them the next Business Day to the *Project Manager* for the purpose only of verification.
Z13.	Collateral Warranties	
	Z13.1	Contractor Collateral Warranties. The *Contractor* shall deliver to the *Client* forthwith upon each demand and in any event within 21 days of each such request collateral warranty agreements in the form of the draft collateral warranty at Appendix [**INSERT**] duly completed in accordance with instructions contained therein and executed in "self proving form" as defined under the Requirements of Writing (Scotland) act 1995 by the *Contractor* in favour of a) each first tenant of the whole or substantial part of Site; b) each first purchaser of the whole or substantial part of the Site; c) the Funder(s) of the parties referred to in paragraphs a) and b) above; d) [**INSERT**] . If the *Contractor* fails to deliver the requested collateral warranty agreements within 14 days of a written request from the *Project Manager* to do so, 20% of the Price for Work Done to Date is retained in assessments of the amount due until the *Contractor*

		has so delivered such collateral warranties.
	Z13.2	Sub-Consultant Collateral Warranties The *Contractor* shall deliver to the *Client* forthwith upon each demand and in any event within 21 days of each such request: (a) collateral warranty agreements in the form of the draft collateral warranty at Appendix [**INSERT**] duly completed in accordance with instructions contained therein and executed in "self proving form" as defined under the Requirements of Writing (Scotland) act 1995 by the sub-consultants employed by the *Contractor*, and if applicable the *Contractor*, in favour of the *Client*; and (b) collateral warranty agreements in the form of the draft collateral warranty at Appendix [**INSERT**] duly completed in accordance with instructions contained therein and each executed in "self proving form" as defined under the Requirements of Writing (Scotland) act 1995 by the sub-consultants employed by the *Contractor*, and if applicable the *Contractor*, in favour of a) each first tenant of the whole or substantial part of Site; b) each first purchaser of the whole or substantial part of the Site; c) the Funder(s) of the parties referred to in paragraphs a) and b) above; d) [**INSERT**] If the *Contractor* fails to deliver the requested collateral warranty agreements within 14 days of a written request from the *Project Manager* to do so, 20% of the Price for Work Done to Date is retained in assessments of the amount due until the *Contractor* has so delivered such collateral warranties.

	Z13.4	Design Subcontractor Collateral Warranties The *Contractor* shall deliver to the *Client* forthwith upon each demand and in any event within 21 days of each such request collateral warranty agreements in the form of the draft collateral warranty at Appendix [**INSERT**] duly completed in accordance with instructions contained therein and each executed in "self proving form" as defined under the Requirements of Writing (Scotland) act 1995 by the Subcontractors with design responsibility, and if applicable the *Contractor*, employed by the *Contractor* in favour of a) the *Client*, b) each first tenant of the whole or substantial part of Site; c) each first purchaser of the whole or substantial part of the Site; d) the Funder(s) of the parties referred to in paragraphs b) and c) above; d) [**INSERT**]. If the *Contractor* fails to deliver the requested collateral warranty agreements within 14 days of a written request from the *Project Manager* to do so, 20% of the Price for Work Done to Date is retained in assessments of the amount due until the *Contractor* has so delivered such collateral warranties.
Z14	Copyright	
	Z14.1	The *Contractor* grants to the *Client* an irrevocable, royalty-free, non-exclusive licence (carrying the right to grant sub-licences) to copy and use the plans, drawings, specifications, calculations, documents and other written or recorded material connected with the *works* and the Site and produced by the *Contractor* or on the *Contractor's* behalf ("the Documents") and to use and reproduce the Documents in connection with the *works,* the Site and/or any construction project in which the *Client* has an interest provided that the *Contractor* shall have no liability for any use of such Documents for purposes other than for those purposes in respect of which they were created or provided or such purposes as are reasonably foreseeable.
	Z14.2	The *Contractor* hereby undertakes to procure from sub-contractors, the grant of the necessary licences in favour of the *Client* to give effect to clause Z14.1.
	Z14.3	The *Contractor* provides to the *Client* upon written request such copies from or extracts of all or any of the Documents as the *Client* reasonably requests at no cost to the *Client*.
	Z14.4	The *Contractor* hereby waives any Moral Rights they may have

		pursuant to the Copyright Designs and Patents Act 1988 in the Documents and shall procure that all other persons shall waive any Moral Rights they have in the Documents.
Z15	Professional Indemnity Insurance	The *Contractor* effects and maintains professional indemnity insurance for any one occurrence or series of occurrences arising out of any one event arising out of this Agreement in the amount of not less than [**INSERT**] **million pounds (£[INSERT],000,000)** sterling from the starting date and thereafter for the period of twelve years from the date of Completion of the *works* provided always that such insurance is available to similar contractors at commercially reasonable rates and terms. The *Contractor* provides the *Client*, upon request satisfactory evidence of such insurance. The *Contractor* complies with all conditions and obligations of any such insurance policy and advises the *Client* forthwith if such insurance ceases to be maintained. If for any period such insurance is not available at commercially reasonable rates the *Contractor* informs the *Client* and shall obtain in respect of such premium such reduced level of insurance as is available to it.
Z16.	Performance Bond	The ***Contractor*** delivers the performance bond required by the *Client* in the form set out in [**Appendix /INSERT**] executed by all parties other then the *Client* in "self proving form" as defined under the Requirements of Writing (Scotland) act 1995 within **21 days** of a written request from the *Project Manager* to do so. If the *Contractor* fails to deliver such performance bond within 21 days of a written request from the *Project Manager* to do so, 20% of the Price for Work Done to Date is retained in assessments of the amount due until the *Contractor* has so delivered such performance bond.
Z17.	Subcontracting	The *Contractor* does not subcontract the whole of the *works.* All conditions of contract of subcontracts entered into by the *Contractor*: • contain an obligation upon the *Contractor* to pay the subcontractor 30 days from receipt by the *Contractor* of a valid invoice rendered by the subcontractor under the terms of the subcontract; and • procure that the relevant sub-contract shall contain such

		obligations as necessary to ensure that it is in all respects compatible with the terms of this contract and, insofar as they are applicable to this contract and the *works*. The *Contractor* provides to the *Project Manager* promptly when requested a certified copy of any sub-contract (save for particulars of the cost of such sub-contract works unless other provisions of this contract oblige the *Contractor* to disclose them).
Z18	Project Documents	The *Contractor* hereby acknowledges that it shall be deemed to be familiar with and have taken full account of the Project Documents to the extent that it has copies of the same or copies are made available to it (under deletion of any confidential information) in sufficient time to allow it to comply with its obligations hereunder and whether or not provided or made available to it before or after the date of signing of this Contract. The *Contractor* warrants that: (a) it has performed and will continue to perform its obligations under this contract in such manner and at such times that no act, omission or default on its part in relation thereto will constitute, cause or contribute to any breach by the *Client* of any of its obligations in the Project Documents; (b) it shall comply with the procedures laid down in the Project Documents for the drawdown of funding; for design development and for (or approval of) changes in design, specification or materials and for the inspection of the *works* prior to Completion or the issue of the Defects Certificate and for similar matters; (c) exercising the level of skill, care and diligence required by clause 21, the design of all elements of the *works* will comply with the requirements of the Project Documents and the counterparties thereto

		(d) it shall carry out and complete the *works* to the standards required by and in accordance with any restrictions imposed upon the *Client* in the Project Documents; (e) it shall comply with any obligations imposed upon the *Client* under such Project Documents insofar as such obligations relate to the design and construction of the *works*, the making of changes to the *works*, the development of the detailed design, the obtaining of required permissions and consents, the selection and appointment of sub-contractors and consultants, the provision of information to a third party relating to the *works*, the requirement for site and other meetings, the procedure to be followed for inspecting the *works* on completion of the *works* (including but not limited to any requirement for joint inspections, the giving on notice of any inspection and the preparation of schedules of defects), the rectification of defects and the insurance of the *works*, failing which the *Contractor* shall indemnify the *Client* for any damages, costs, fees, expenses or losses incurred or suffered by the *Client* arising as a result of a breach by the *Contractor* of this clause Z18. Notwithstanding anything elsewhere in this Contract, where any obligation in a Project Document requires a higher standard to be achieved or a different procedure to be followed or a different timescale to be complied with than a standard or procedure or timescale in this Contract, the *Contractor* shall carry out his duties and obligations under this Contract such that he complies with, and by such compliance ensures that the *Client* complies with, the standard or procedure or timescale in the Project Document. Where any Project Document is provided to the *Contractor* with insufficient time to allow it to comply with its obligations hereunder, the *Contractor* shall in respect of such Project Document comply with the obligations imposed upon the *Contractor* pursuant to this clause Z18, save that the *Contractor*

		shall not be required to comply with such obligations where the *Contractor* has within 7 days from receipt of such Project Document notified the *Client* in writing of the reasons why and the extent to which it is unable to comply with the provisions of this clause Z18 in respect of such Project Document. The *Contractor* hereby acknowledges that it has copies of and is deemed aware of the terms of the following Project Documents: [**INSERT**]
Z20	Nuisance	
	Z20.1	The *Contractor* shall at all times, prevent any public or private nuisance (including any such nuisance caused by noxious fumes, noisy working operations, vibration or the deposit of any material or debris on the public highway or rail infrastructure, contamination of river/water courses, etc.), trespass over adjoining property, or other interference with the rights of any occupier or owner neighbouring or in the vicinity of the Site or permitted accesses thereto and in each case any adjoining or neighbouring landowner, tenant or occupier or any public utility company arising out of the carrying out of the *works* or of any obligation hereunder and shall not breach the condition of any consent or license or give rise to enforcement action or criminal proceedings by any relevant authority, and shall assist the *Client* in defending any action or proceedings which may be instituted in relation thereto. The *Contractor* shall be responsible for and shall indemnify the *Client* from and against any and all expenses, liabilities, losses, claims and proceedings whatsoever resulting from any such nuisance or trespass or interference or breach, save only where such nuisance or trespass or interference is the direct and unavoidable consequence of an express instruction of the *Client* and not as a result of how the instruction was implemented
	Z20.2	Without prejudice to the *Contractor*'s obligations under Clause Z20.1, the *Contractor* shall ensure that there is no trespass on or over any adjoining or neighbouring property arising out of or in

		the course of or caused by the carrying out of the *works* or of any obligation pursuant to Section 4 (Quality Management). If the carrying out of the *works* or of any obligation pursuant to Section 4 (Quality Management) is likely to necessitate any interference with the rights of adjoining or neighbouring owners or occupiers or any party working on or at, owning, letting, financing, occupying or otherwise attending any neighbouring or adjacent sites, then the *Contractor* shall, at no cost to the *Client*, notify the *Client* of same and await express instructions from the *Client* as to how to proceed. In the event that the *Client* decides that it shall obtain the prior written agreement of such owners and/or occupiers or other parties thereto, the *Contractor* shall provide the *Client* with all reasonable assistance in dealing with the same. The *Contractor* shall comply in every respect with any conditions contained in any such agreement.
Z21	Data Protection	
	Z21.1	The *Contractor* shall comply with the Data Protection Act 1998 ("the 1998 Act") and any other applicable data protection legislation (including from 25 May 2018 onwards Regulation (EU) 2016/679 (the "GDPR") and/or any data protection and privacy laws enacted as a replacement of the GDPR as a result of the GDPR ceasing to have direct effect in the UK). In particular, the *Contractor* agrees to comply with the obligations placed on the *Contractor* by the seventh data protection principle ("the Seventh Principle") set out in the 1998 Act, namely:
	Z21.2	to maintain technical and organisation security measures sufficient to comply with the obligations imposed on the *Contractor* by the Seventh Principle;
	Z21.3	only to process Personal Data (as set out in the 1998 Act) for and on behalf of the Client for the purpose of performing in and accordance with the Contract and where necessary only on written instructions from the *Client* to ensure compliance with the 1998 Act; and
	Z21.4	to allow the *Client* to audit the *Contractor*'s compliance with the requirements of this paragraph 2.1.3 (Data Protection) in respect of or in connection with this Agreement on reasonable notice and/or to provide the *Client* with evidence of its compliance with the obligations set out in this paragraph 2.1.3 (Data Protection).

	Z21.5	All claims and proceedings and all liability, loss, costs and expenses incurred in connection therewith incurred by the *Client* or any affiliate as a result of any claim made or brought by any individual in respect of any loss, damage or distress caused to that individual as a result of the *Contractor*'s unauthorized processing, unlawful processing, destruction of and/or damage to any Personal Data processed by the *Contractor*, its employees or agents who provide the *works* are a *Contractor* risk..
Z22	Freedom of Information	
	Z22.1	The *Contractor* shall co-operate with, facilitate, support and assist the *Client* to comply with the Freedom of Information (Scotland) Act 2002 ("FOISA") (which shall be deemed to be in full force and effect for the purposes of this Agreement) and any codes of practice applicable from time to time relating to access to public authorities' information, including without limitation by providing Documents and other information relating to this Agreement or to the *Contractor*, or any other relevant information within the timescales necessary to allow the *Client* to comply with its obligations and duties under FOISA and the relevant codes of practice.
	Z22.2	All information submitted to the *Client* may need to be disclosed and/or published by the *Client*. Without prejudice to the foregoing generality, the *Client* may disclose information in compliance with FOISA, (the decisions of the *Client* in the interpretation thereof shall be final and conclusive in any dispute, difference or question arising between the *Client* and the *Contractor* in respect of disclosure under its terms), any other law, or, as a consequence of judicial order, or order by any court or tribunal with the authority to order disclosure. Further, the *Client* may also disclose all information submitted to them to the Scottish or the United Kingdom Parliament or any other department, office or agency of Her Majesty's Government in Scotland or the United Kingdom, and their servants or agents. When disclosing such information to either the Scottish Parliament or the United Kingdom Parliament it is recognised and agreed by both parties that the *Client* shall if they see fit disclose such information but are unable to impose any

		restriction upon the information that they provide to Members of the Scottish Parliament, or Members of the United Kingdom Parliament and such disclosure shall not be treated as a breach of this agreement.
	Z22.3	If the *Contractor* considers that specific information provided to the *Client* is potentially exempt from disclosure under FOISA (where, for example, it is considered to be commercially confidential), the *Contractor* will identify exactly which information it considers is exempt, state the period of sensitivity and provide justification to the *Client* for its assertions (for example, identify what harm may result from disclosure). The Parties acknowledge that the *Client* is not bound by the *Contractor*'s views in this regard and may in its absolute discretion disclose and/or publish any such information in order to comply with FOISA.
Z23	Applicable Law	The *Contractor* complies at all times with Applicable Law.
Z24	Construction (Design and Management) Regulations 2015	
	Z24.1	The *Contractor* warrants and undertakes to the *Client* that it has and shall maintain the skills, knowledge, experience and organisational capability to be able to meet all CDM Regulations requirements and fulfil such duties as are relevant to him thereunder (including to the extent applicable those of Principal Contractor and Principal Designer (as more fully described in the CDM Regulations). The *Contractor* shall, at no cost to the *Client*, fulfil all of its obligations and duties arising from the CDM Regulations. The *Contractor* shall ensure that no act, omission, breach or default by or on behalf of the *Contractor* or those for whom it is responsible causes or contributes to any breach of the CDM Regulations by the *Client*. In particular (but without limitation) the *Contractor* shall satisfy itself that any person with whom it sub-lets any portion of the *works* (including any design) has (and maintains) the skills, knowledge, resources and experience and organisational capability to fulfil its obligations under the CDM Regulations; and has allocated adequate time, monies and resources for the purposes of meeting the requirements of the CDM Regulations and Applicable Law prior to their being appointed.

Appendix 9: Equalities Impact and Fairer Scotland Duty Impact Assessment

Part 1: Background

Section A	
Project name	Manufacturing Innovation Centre for Moray (MICM)
What is the purpose of the project?	The investment objectives of the project are to: • To increase BERD (Business Enterprise, Research and Development) in Moray's indigenous manufacturing companies • To increase growth, productivity, and efficiency in Moray's indigenous manufacturing companies • To increase the number of manufacturing start-ups in Moray • To support the attraction of manufacturing inward investment to Moray. • To accelerate the transition to net zero in Moray's indigenous manufacturing companies
Project owner	Highlands and Islands Enterprise
EQIA lead (person to complete the EQIA and will co-ordinate and involve stakeholders.)	Project SRO: Moray Area Manager, Highlands and Islands Enterprise
EQIA contributors	MICM Project Board
Date of EQIA	Updated 7/8/23

Section B	
How does the project: • meet one or more of the general duties under the Equality Act 2010 and • address socio-economic disadvantage or inequalities of outcome?	
General duties	**Please Explain**
Eliminating discrimination, harassment and victimisation	In delivering the project, HIE's core priority is to ensure that it has due regard to the Equality Act 2010 and to **avoid discrimination through the physical design of buildings which are subject to refurbishment or being newly constructed within the MICM project.** HIE will also have due regard to the Equality Act 2010 and **avoid discrimination in the ways that HIE, as landlord, operates these**

	buildings, including through its approach to service delivery, whether through fixed-term project staff or a Contract for Services procured to support the project's objectives. The approach to this duty under MICM's delivery is the same as the approach taken by HIE at Horizon Scotland.
Advancing equality of opportunity*	As the project within MICM's *direct* control is principally a building project and a service delivery project targeted at SMEs, opportunities to advance equality of opportunity will be focused on the design of the buildings and the overall SME service offer which are subject to investment. HIE will ensure that the brief for detailed design and planning requires the design and planning teams to actively consider the opportunity to create spaces which could help to advance equality of opportunity for certain protected groups (see Part 2 – Positive Impacts). HIE will also ensure that the service delivery arrangements incorporate all of its standard equalities obligations, including measures to ensure that equality of opportunity is advanced for protected groups. HIE's approach to MICM's delivery will also have regard to the equalities and wellbeing in manufacturing: recommendations report prepared by the independent Equalities and Wellbeing in Manufacturing Working Group in November 2022[37]
Fostering good relations **	As above
Socio-economic disadvantage	The MICM project will not directly contribute to tackling socio-economic disadvantage and this is not a strategic focus of the project.
Inequalities of outcome	The MICM project will contribute indirectly to addressing inequalities of outcome through the provision – indirectly through SMEs - of economic opportunities in the form of well paid jobs that are potentially attractive to young people in a rural area.

[37] https://www.gov.scot/publications/equalities-wellbeing-manufacturing-recommendations-report/

Section C
Is it likely that there is no impact on any of the equality groups (having considered the above)? If yes, please explain why (based on evidence) if this is the case. There is then no need to complete Parts 2 and 3. However, in most cases it is expected that there will be positive impacts.
No. There will be positive impacts on some of the general duties of the Equality Act 2010 as discussed above. Those directly impacted by the project are as follows: 1. Staff engaged in delivering the Contract for Services (MICM Director, MICM Manager, Administrator) 2. MICM tenants: businesses engaged in manufacturing activity, including scientific research, consultancy and other sectors associated with manufacturing sectors and the low carbon agenda 3. Staff employed by MICM tenants and other MICM service users (including visiting SMEs and students) The diversity of MICM tenants, as well as their own equality and diversity policies, will directly impact the success and vitality of MICM and its pursuit of Equalities objectives and in addressing Inequalities of outcome through the provision of above average salary jobs. The remainder of this document focuses solely on those impacts which are within MICM's *direct* control.

Part 2: Evidence and Impact Assessment

Section A			
Based on available evidence, consider what the positive or negative impacts of a policy change are on the protected characteristics.			
Protected characteristic	**Positive impact**	**Negative impact**	**No impact**
Disabled people	**Building design:** This will be addressed in the detailed design stage **MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Sexual orientation	**MICM staffing:** This will be addressed in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Women	**MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Men			X
Transgendered people	**Building design:** This will be addressed in the detailed design stage **MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Race (includes Gypsy Travellers)	**MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Age (incl. older people aged 60+)	**MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Children and young people	**MICM operation:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Religion or belief	**MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Pregnancy & maternity	**MICM staffing:** This will be addressed either in HIE's recruitment of fixed-term project staff or in the Contract for Services which will require the service provider to adhere to HIE's Equality and Diversity Policy (see Appendix 10)		
Marriage & civil partnership			X

Section B			
Please also consider the impact of the project in relation to:			
	Positive impact	**Negative impact**	**No impact**
Looked after children and care leavers			Not applicable
Privacy (e.g. information security & data protection)			HIE's existing adherence to its information security and data protection policy will extend to MICM and to any contract for Services
Economy	The positive economic impacts of the investment are set out in the Economic Case of the FBC following a methodology detailed in Appendix 2.		

Section C	
Record the evidence used to support the assessment. It can include officer knowledge and experience, research, customer data and surveys, public engagement and feedback etc. The amount of evidence gathered should be proportionate to how relevant a particular policy or service is to equality. If there are gaps in evidence, record these.	
Evidence used	**Source of evidence**
1. Officer knowledge and experience	Direct experience of designing and operating Units 9 and 10 in their current form as well as owning Enterprise Park Forres, including Horizon Scotland which is managed under a Contract for Services
Evidence gaps	**Planned action to address evidence gaps**
1. Property and service design features which would advance equality of opportunity	This will be undertaken during the detailed design stage for MICM Hub and MICM Grow-on space as well as in the design of the service delivery arrangements
2. Property and service design features which would foster good relations	This will be undertaken during the detailed design stage for MICM Hub and MICM Grow-on space as well as in the design of the service delivery arrangements
3. Age and gender profile of MICM staff and events attendees	Collected by HIE if fixed-term project staff. Data on MICM staff to be provided under the terms of the Contract for Services if that delivery route is chosen. Requirement to undertake surveys of all events to capture profile of end users

Part 3: Recommendations

Section A		
Recommendations should be based on evidence available at the time and aim to mitigate negative impacts or enhance positive impacts on any or all of the protected characteristics.		
Recommendation	Lead person	Timescale
1. Ensure that HIE's general duties under the Equality Act 2010, and the commitments and aspirations expressed in this Equality Impact Assessment, feature prominently in the design and planning briefs for the detailed design process for MICM	SRO	Unit 9 Design brief: August 2023 Service delivery arrangements – November 2023 to January 2024

Part 4:Equality Impact Assessment Summary Report

What are the main impacts on equality?
The MICM FBC has focused on major concept design options on the scale and manner of physical development and on the design if MICM services to meet the project's investment objectives. The detailed design and planning work which will have a vital bearing on equalities impact is still to come. The next stage of project development activity will focus on detailed design both of the property requirements and service delivery arrangements. The project will meet the general duty under the Equality Act 2010 of eliminating discrimination, harassment and victimisation. As noted above, the potential to deliver positive impacts under the other two general duties within the Equality Act (advancing equality of opportunity and fostering good relations) will also form part of the brief for the various professional teams supporting design and planning activity.
In relation to a strategic decision, how will inequalities of outcome caused by economic disadvantage be reduced?
Tackling socio-economic disadvantage is not a priority for the MICM project. Other projects within the Growth Deal have an explicit focus on this goal and clearly the Fairer Scotland Duty under the Equality Act 2010 is an important consideration for strategic decision-making at overall Moray Growth Deal level. Reducing inequalities of outcome is likely to be an indirect outcome of MICM. It will be dependent on jobs created by existing and new tenants, their salary levels and their attractiveness to young people living in Moray.
What are the main recommendations to enhance or mitigate the impacts identified?
No negative impacts on equalities have been identified at this stage. As noted above, opportunities to enhance positive impacts, and to identify and mitigate any potential negative impacts will be taken as part of the detailed design and planning stage.

If there are no equality impacts on any of the protected characteristics, please explain.

Appendix 10: HIE Equality and Diversity Policy

EQUALITY AND DIVERSITY

POLICY

2015
Policy Owner – HR

HIE
Highlands and Islands Enterprise
Iomairt na Gàidhealtachd 's nan Eilean

Index

1. Introduction

This policy sets out Highlands and Islands Enterprise's approach as an employer to equality and diversity. HIE is fully committed to eliminating unlawful and unfair discrimination and values the differences that a diverse workforce brings to the organisation.

Equality - is about treating people fairly regardless of differences between them. Equality is enshrined in HIE's obligation to comply with anti-discrimination legislation which protects us all from being discriminated against on grounds which are unfair.

Diversity - is about understanding, respecting and valuing those differences and the unique contribution which each of us can bring to our employment. An employer which values diversity makes the best of people's talents whatever their backgrounds, experiences, styles, perceptions or values and beliefs.

Considering equality and diversity together is therefore not about treating everyone the same. It is about treating people differently, according to their needs and circumstances, with the aim of ensuring that all employees receive fair treatment. For example, HIE recognises that job candidates who have a disability are less likely to find employment than candidates who have the same qualifications and experience and have no disability. Consequently we guarantee a job interview to disabled candidates who meet the essential criteria for a job. The appointment decision, in the same way as all decisions on recruitment, selection, training, promotion and career development, is based on objective and job-related criteria.

Our commitment to equality and diversity in employment includes:

- the promotion of equality of opportunity in employment
- the promotion of diversity and equality in the development, implementation, regular monitoring and review of employment policies with the aim of ensuring that people receive fair and consistent treatment
- a continuing programme of action to make the policy and its implementation fully effective, including training and guidance
- the elimination of discrimination of any kind
- the provision of an in-house mediation service and offer of outside counselling, supported by occupational health privison and an Employee Assistance Programme
- ensuring an annual review and, where necessary, revision of this policy.

We are committed to maintaining a culture which recognises and rewards individual achievement and merit regardless of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation as well as working pattern (full-time or part-time) and contract status (permanent or fixed term).

HIE believes that the promotion of equality and diversity is key to good management, to developing an inclusive workplace culture and in maximising employee productivity. HIE therefore expects all employees to be treated with respect at all times and not just in relation to the characteristics protected by equality legislation. **(Appendix A)**

HIE is committed to providing a working environment in which all employees can realise their full potential, free of harassment or discrimination in any form. HIE supports employees to ensure that they understand their personal responsibility in this and that they make this happen in practice.

2. Recruitment and selection

The Human Resources Team will be responsible for ensuring that all recruitment and selection activity is conducted in line with HIE's commitment to equality and diversity. HIE will ensure that training and support in equality and diversity is available to all staff involved in recruitment or other decision making where equality of opportunity issues are likely to arise.

Employees are encouraged to apply for internal promotion or other vacancies and where possible posts will be open to all employees. However on occasion it may be necessary to restrict recruitment within a team, for example where there is organisational restructuring. Please refer to HIE's Organisational Change Policy. All applications will be given full consideration, and this will be supported by recruitment processes which focus on information that is relevant to the requirements of the post. Appointment decisions will be recorded and feedback provided to candidates on request.
Equality monitoring data will not be disclosed to the recruiting panel and will be used for monitoring purposes only.
External HIE vacancies will be advertised widely to ensure that opportunities are accessible to a diverse recruitment pool. Recruitment monitoring will be carried out to identify whether HIE's workforce is representative of the local community and the wider recruitment pool.

All recruitment material will positively encourage applications from all suitably qualified and experienced people and where appropriate, applications from under-represented groups will be encouraged.

3. Training and development

Promotion and career development are based on objective and job-related criteria. Consequently access to training and development events will be determined by reference to individual development plans, in line with the Further Education policy. Any selection process for training and development opportunities will be free from bias of any kind.

Training on equality and diversity is open to all employees and is an integral part of induction. Managers will be appropriately trained to enable them to properly and fairly implement HIE's HR policies and procedures and carry out their management responsibilities effectively. This includes taking into account the varying needs and circumstances of team members and how these may develop over time.

HIE may encourage, where supported by evidence of disadvantage, selected employee groups to take advantage of training or development opportunities aimed at minimising that disadvantage.

4. Equal pay

In support of HIE's commitment to equality and diversity, HIE operates a job evaluation scheme to ensure that pay for work done is fair across the agency. Where employed doing the same or broadly similar work, which has been given equal value under HIE's job evaluation scheme, men and women will be treated equally with regard to terms and conditions of employment and pay grades.

All staff will be considered for pay progression in line with public sector pay policy.

5. Employee benefits and policy development and review

HIE aims to provide a range of employee benefits which are relevant to and valued by HIE's employees, whose interests and circumstances will vary across the workforce and over time. HIE also endeavours to take account of the differing needs and aspirations of HIE's employees alongside HIE's business need in the development and review of a range of policies and practices, which will be assessed for their impact in relation to equality characteristics.

6. Harassment

All employees have a personal responsibility not to behave in a manner that is, or could be considered by others to be offensive. HIE finds any form of harassment, including third party harassment, to be unacceptable and will act to eliminate it from the workplace. The bullying and harassment policy sets out further information on this.

7. Individual responsibilities

All HIE employees have a responsibility to promote and advance this policy. HIE will not tolerate discriminatory behaviour, and lack of knowledge or awareness will not be an acceptable defence.

HIE will provide training and guidance for all staff, particularly those with management responsibilities, to encourage commitment to and awareness of equality and diversity issues and responsibilities.

Employees must familiarise themselves with their obligations under this policy and, in the event of any uncertainty, consult with their manager or the HR Team before taking any action.

Any comments, actions or materials that may be considered offensive are unwelcome and should be kept away from the workplace.

Line managers have a particular responsibility to ensure that their staff are aware of and act in accordance with this policy at all times.

8. Complaints

Any breach of this policy should be raised as a grievance under the HIE Grievance Procedure. If the complaint is about bullying or harassment reference should be made to the HIE Bullying and Harassment policy for more information. These policies outline how action can be taken at an informal level where appropriate.

9. Breach of equality and diversity policy

Breaches of this policy will result in action under the disciplinary procedure. Serious breach of HIE's commitment to equality and diversity will be considered to be gross misconduct and will result in summary dismissal.

10. Monitoring

In order to review the success of this policy HIE will ask all job applicants to complete an equality monitoring form. All existing staff will from time to time be asked to complete information to help HIE to understand the staff profile from an equality perspective and compare it with the labour market. Understanding HIE's demographic profile assists us to identify existing or emerging equality issues or trends.

Where there is under-representation of particular groups, the underlying reasons will be investigated and, where appropriate, practical measures will be taken to address the issue identified.

11. Further information

This policy, which will be widely publicised within HIE, has been prepared in consultation with the Leadership Team and the JNC. If you require any further advice or assistance, please contact the HR team.

Policy Owner:	HR	**Last reviewed:**	December 2015
Review in:	2 years		

APPENDIX A DISCRIMINATION LEGISLATION

Equality Act 2010

The Equality Act 2010 came into force on 1 October 2010. The purpose of the Equality Act 2010 is to simplify discrimination legislation and create a more consistent and effective framework, while at the same time extending discrimination protection.

The protected characteristics under the Equality Act 2010 are:

- **age** (any age group);
- **disability** (a physical or mental impairment which has a substantial and long-term adverse effect on that person's ability to carry out normal day-to-day activities. This includes a range of illnesses);
- **gender reassignment** (the process of transitioning from one gender to another);
- **marriage and civil partnership** (marriage - between a man and a woman; civil partnership - a legally recognised relationship between same sex partners);
- **pregnancy and maternity** (pregnancy – condition of being pregnant; maternity – the period after birth (maternity leave in employment context and for 26 weeks after birth in other situations). This includes breastfeeding.
- **race** (defined by race, colour, nationality (including citizenship), ethnic or national origin;
- **religion or belief** (religious and philosophical beliefs including lack of belief (e.g. Atheism);
- **sex** (men or women);
- **sexual orientation** (sexual attraction towards sex, the opposite sex or to both sexes)

The Act defines direct discrimination as less favourable treatment because of a protected characteristic. Employers will be liable for acts of unlawful discrimination committed by their employees against other employees or customers in the course of their employment unless they can show that they took such steps as were reasonably practicable to prevent those acts. There is no limit on compensation for unlawful discrimination, which includes compensation for injury to feelings and personal injury.

Employers may take positive action in the form of proportionate measures to encourage or train people from an under-represented group to apply for jobs, overcome a perceived disadvantage or meet specific needs based on a protected characteristic. For example, an employer could facilitate women having access to childcare facilities, or provide certain religious groups with time off for religious observance.

The Equality Act 2010 also makes it unlawful to discriminate in the provision goods and services. There are slight differences in the characteristics currently protected but broadly speaking the Equality Act prohibits discrimination or harassment of customers or clients because of the protected characteristics of disability, gender

reassignment, pregnancy and maternity, race, religion or belief, sex, and sexual orientation.

Forms of Discrimination in Employment

Direct Discrimination occurs where someone is treated less favourably on the grounds of sex, race, disability, sexual orientation etc., than another is or would be treated.
(E.g. a candidate is not invited for interview because of his/her ethnic background)

Indirect Discrimination occurs where a condition or practice is applied but it adversely affects a considerably larger proportion of one particular group (men, women, racial group etc), and it is not justifiable to apply that condition or practice. Pregnancy and maternity is not covered by the provisions on indirect discrimination. (e.g. a job specification includes holding a driving licence as an essential attribute. This disadvantages a disabled candidate who may not drive but who can access other effective means of travelling to visit clients etc.)

Associative discrimination is where an individual is directly discriminated against or harassed for association with another individual who has a protected characteristic This provision does not apply to marriage and civil partnership, and pregnancy and maternity.
(e.g. an employee is not given a promotion because they have a disabled partner.)

Perceptive discrimination is where an individual is directly discriminated against or harassed based on a perception that he/she has a particular protected characteristic when he/she does not, in fact, have that protected characteristic. This provision does not apply to marriage and civil partnership, and pregnancy and maternity.
(e.g. an employee is not given lead role on a major project because their manager thinks they are gay.)

Harassment, which can also be a form of discrimination, occurs where unwanted conduct affects the dignity of men and women in the workplace. This is defined further and dealt with in the HIE's Bullying and Harassment policy. Essentially defined where unwanted conduct affecting the dignity of men and women in the workplace. This provision does not apply to marriage and civil partnership, and pregnancy and maternity.
(e.g. employees humiliate a colleague by telling jokes about their religion.)

Third-party harassment occurs where an employee is harassed and the harassment is related to a protected characteristic (other than marriage and civil partnership, and pregnancy and maternity), by third parties such as clients or customers. For an employer to be liable:

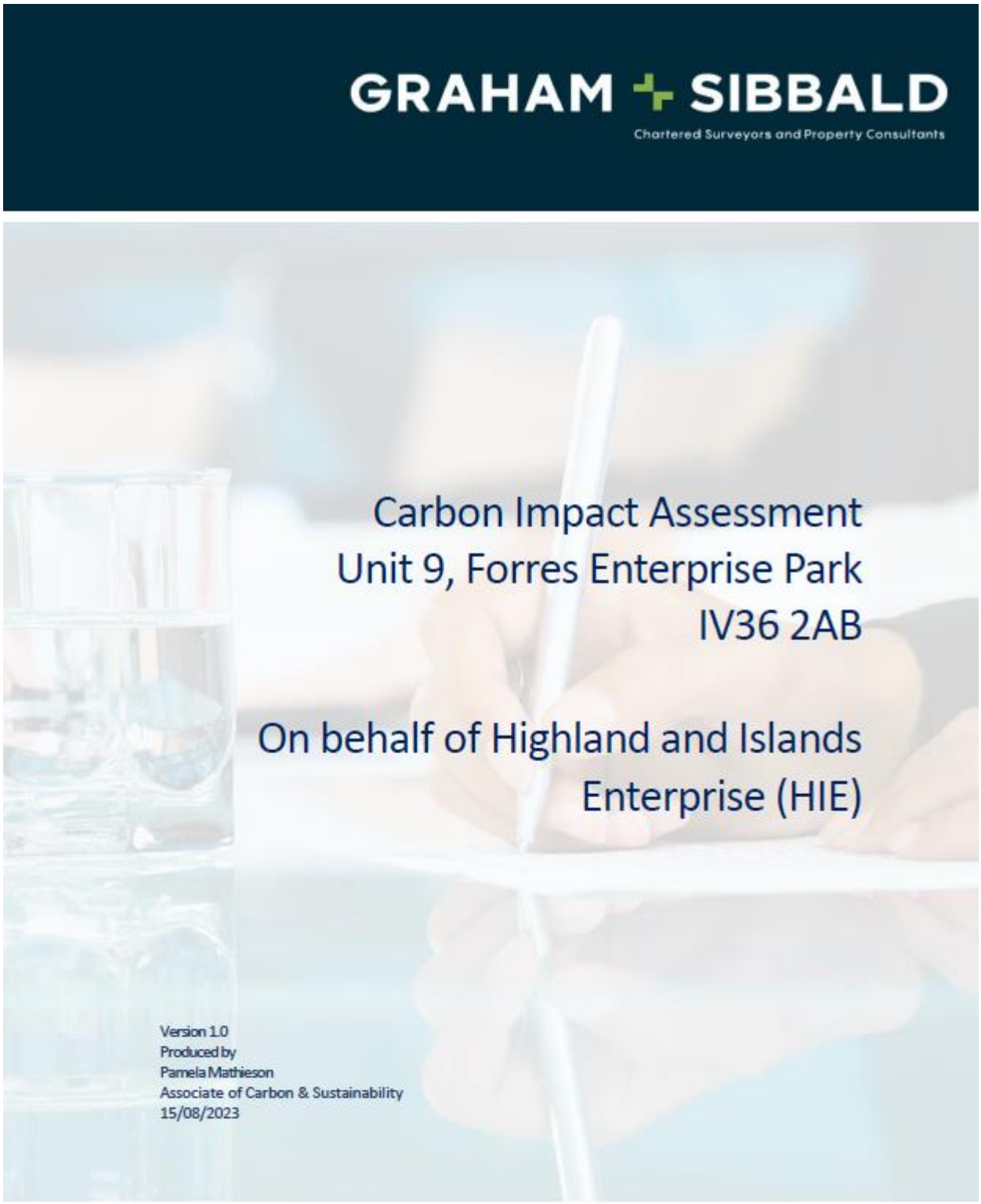
- the harassment must have occurred on at least two previous occasions (although not necessarily by the same harasser or suffering the same type of harassment);
- it must be aware that the previous harassment has taken place; and
- it must have failed to take reasonable steps to prevent harassment from happening again.

(e.g. a member of the public makes scathing comments about an employee's ability to deal with their enquiry because they consider them too young to know what they are doing.)

Victimisation occurs when someone is treated badly because they have made or supported a complaint or grievance under the Act.
(e.g. an employee is not shortlisted for promotion because last year they took out a grievance against their manager for not shortlisting them for a previous role.)

Failure to make reasonable adjustments occurs where a physical feature or a provision, criterion or practice puts a disabled person at a substantial disadvantage compared with someone who does not have that protected characteristic and the employer has failed to make reasonable adjustments to enable the disabled person to overcome the disadvantage.
(e.g. not providing specialist software for a member of staff who develops a visual impairment and whose job involves using a computer.)

Appendix 11: Carbon assessments



Contents

1. Executive Summary

This report is a Carbon Impact Assessment of the proposed refit of the property at Unit 9 Enterprise Park, Forres, IV36 2AB, as well as an alternative option for a new build property of equivalent size to perform the same function.

The assessment was carried out in accordance with the RICS Professional Statement, *Whole life carbon assessment for the built environment* and BS EN 15978:2011.

The carbon impacts for each scenario are estimated, based on the indicative concept stage plans, are estimated as follows:

Activity	Carbon Impact (tonnes CO_2e)	Normalised Carbon Impact per GIA (tonnes CO_2e/m^2)
Embodied carbon:		
Option 1 - refit of Unit 9, Forres Enterprise Park	63.378 tCO_2e	0.059 tCO_2e/m^2
Option 2 – new-build construction	466 tCO_2e	0.435 tCO_2e/m^2
Operational carbon:		
In-use carbon (gross)	49.493 tCO_2e	0.046 tCO_2e/m^2
Carbon mitigation (renewable energy generation)	- 8.266 tCO_2e	-0.008 tCO_2e/m^2
In-use stage operational carbon (net)	41.227 tCO_2e	0.038 tCO_2e/m^2

The estimated carbon impact provided in this assessment is preliminary in nature and is contingent upon further refinement through more detailed design plans and material specifications. As the project progresses and specific construction details are developed and finalised, adjustments to the carbon impact assessment will be necessary to reflect the actual circumstances and choices made during the development process.

2. Introduction

2.1. Background

Graham + Sibbald have been appointed by Highlands and Islands Enterprise (HIE) to conduct an assessment of the carbon impact of intended changes to one of its properties, covering aspects of refit, fabric improvements, and building systems and infrastructure opportunities as detailed in the proposed programme of works in Table 1 below. The refit project is currently at concept stage, with a detailed refit design solution up to and including RIBA Stage 4 to follow in due course.

The property, Unit 9, The Enterprise Park, Forres, is a contemporary single storey building with mezzanine level originally constructed in 2009 for the Life Science Sector. The 1072 m^2 site, which previously lay vacant for a substantial period and is currently only partially occupied, is now being considered for adaptation to accommodate the Manufacturing and Innovation Centre Moray (MICM).

As the Scottish Government's economic development agency for the Highlands and Islands of Scotland, HIE works with private business and public and voluntary sector organisations to build sustainable economic growth. Therefore, in line with the Scottish Government's stated net zero

carbon by 2045 objective, HIE has set itself challenging targets to demonstrate leadership in achieving carbon reduction.

As significant carbon emissions arising from the built environment are attributable to the embodied carbon in the construction of built assets as well as the operational emissions arising through their use, this report intends to present a preliminary assessment of the carbon impact of retaining and refitting the existing property against a new build construction.

This assessment is based wholly on the provisional conceptual statement provided by HIE which, recognising that retaining existing building structures for reuse and retrofit is typically the lowest carbon option, proposes using the current ground and first floor layouts of Unit 9 with minimal reconfiguration.

2.2. Scope & Boundaries

This initial exercise is a high-level assessment of the notional carbon impact of proposed changes identified at the early (conceptual) stage of the project. It is, therefore, subject to change as the design and specification of materials, components, equipment and building services evolves into practical, approved solutions. Design decisions and therefore carbon impact may be further affected as building purpose and future tenant uses become better-defined

As instructed by the client, the assessment expressly excludes an embodied Carbon or Whole Lifecycle Carbon Assessment of the existing building and relates only to the carbon impact realised by the introduction of materials, components, equipment and building services and installation works involved in the refit project, namely Use Stages B4-B5 of the project Whole Life Cycle.

A further assessment of the operational energy use phase of the building, Use Stage B6, has also been conducted. However, as the future use of the property has not yet been fully defined, this assessment is estimated on the basis of CIBSE benchmarks for light industrial use buildings.

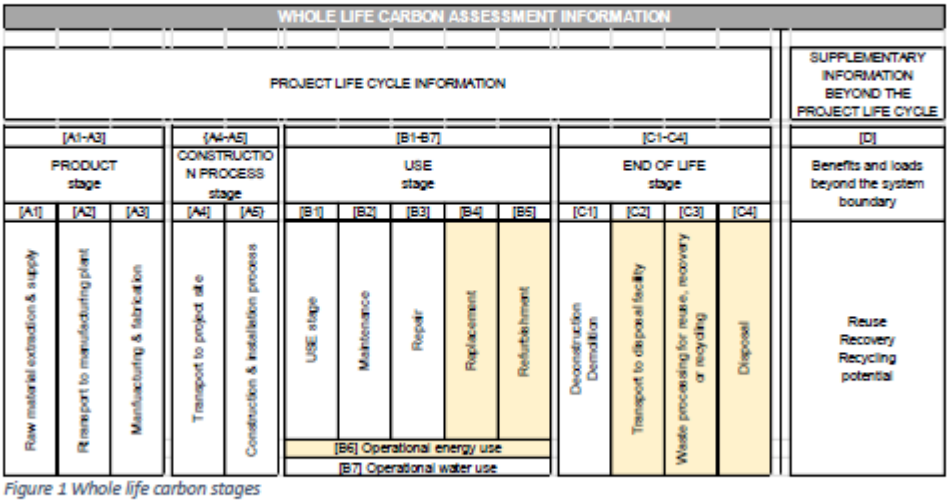


Figure 1 Whole life carbon stages

The assessment of the early concept stage design (RIBA Stage 2) was conducted by Graham + Sibbald in August 2023.

2.2.1. Proposed Changes: Retain and refit scenario

It is HIE's intention, if economically and environmentally viable, to prioritise the refit and repurposing the building to serve a variety of purposes, including office/administration space, research and development, and light industrial activities.

The proposed refit, subject to change, is anticipated to include the following programme of works:

Table 1 Summary of proposed changes for retention and refit of building

Location of change	Description of proposed changes/activities
Entrance	Upgrade entrance doors to controlled access/power assisted unit
	(a) Dispose of existing doors
	(b) Install replacement double swing doors
	(c) Install swing door drive system
Left hand unit	Minor strip out of small room and install new double doors
	(a) Dispose of existing doors
	(b) Install replacement double internal doors
	(c) Sub-divide office spaces & create visual link with glazed openings
Lift	Relocate/rotate lift:
	(a) Retain and rotate lift
	(b) Refresh walls
Rear Labs	Redecoration only
Front right unit	Replace existing windows with roller shutter door for vehicular access (assumed 3.5 tonnes)
	(a) Dispose of existing window
	(b) Install roller shutter door
	(c) External wall reconstruction
	(d) Dispose of office cubicles
	(d) Internal wall and floor refinish
	(e) Create vehicular access - assumed 3.5 tonnes
Mezzanine	Separation of mezzanine from ground floor
	(a) create partition wall, construction: timber, plasterboard, plaster skim, skirting
	(b) introduce acoustic ceiling over mezzanine areas inc meeting rooms
Stairs	Improve fire escape staircase
	(a) remove existing staircase
	(b) Install replacement staircase, material: concrete & steel
Lighting	Upgrade lighting to LED
	(a) remove existing lighting
	(b) remove existing single phase lighting circuitry
	(c) Install new 3-phase wiring
	(d) install new LED lighting
Interior finishes	Refresh interior finishes
	(a) wall finish - paint
	(b) Floor finish - remove existing floor coverings
	(c) Floor finish - install new floor covering: carpet tiles and heavy duty vinyl
Roof	Improve thermal performance and reduce noise impact of roof
	(a) transportation of roofing materials and scaffolding
	(b) install 100mm of insulation overlay
	(c) install roof cladding/waterproof membrane
Ceiling	Install false ceiling to reduce volume to of space to be heated

	(a) False ceiling - install frame
	(b) False ceiling - install ceiling acoustic tiles (600x600)
	(c) False ceiling - install insulation above tiles
Renewable energy	Install solar PV array on roof
	(a) PV array: install photovoltaic panels
	(b) PV array: install inverter
BMS	Review and update if required
Location of change	Description of proposed changes/activities

2.2.2. Proposed Changes: New build scenario

As an alternative to the retention and reuse of the existing building structure, consideration is given to the whole life carbon impact of a new building construction. For the purposes of the assessment, it is assumed such construction would take place on a green field site and therefore does not include any demolition.

2.3. Methodology

The assessment is conducted in accordance with the methodology established in BS EN 15978 and BS EN 15643, which inform the RICS Professional Statement, *Whole life carbon assessment for the built environment*.

Whilst early stage assessments (from RIBA Stage 2) of proposed developments are recommended by RICS to establish a baseline carbon estimate for the project and to integrate whole life carbon considerations into the design process, due to the early stage of the project, very little data is available relating to the material quantities and products that will make up the refit components of the development. Therefore, the assessment of the carbon impact of the replacement, refurbishment, and end of life disposal of waste materials in the refit scenario are based upon the outline specification listed by the Client, together with the estimated gross quantities outlined in Order of Cost plan prepared by the Torrance Partnership LLP where applicable.

Due to the early concept stage of the development, the Order of Cost document does not currently specify a detailed list of materials and quantities, often basing costs on guide costs per floor area to be refurbished (e.g., lighting costs per m^2) rather than specifications and quantities. Therefore, whilst an attempt was made to align the defined project scope with the Order of Costs created by the Torrance Partnership, any disparities that emerged were addressed by exercising judgement based on our understanding of the client's conceptual intent and available details about the existing building.

The overall embodied carbon impact of the materials used in the refurbishment and fit out Unit 9 has been estimated using the global warming potential of the assumed materials/components declared in manufacturers' Environmental Product Declarations (EPDs) where available. Generic products have been selected from EPD databases for the purpose of this early assessment and, therefore, the assessed carbon impact is subject to change when the materials and products to be used in the development are specified and quantified at a later design stage.

The assessment of the carbon impacts associated with the alternative new-build construction scenario is based on industry standard embodied carbon benchmarks produced by RICS for a small to medium light industrial use building of an equivalent size and style as Unit 9. The peer-reviewed benchmarks produced in RICS information paper, *Methodology to calculate embodied carbon of materials* (Figure 6), have been established to fill the information gap and provide a high level

preliminary estimate of the cradle-to-gate embodied carbon emissions of the project in the absence of detailed design or material specification.

Further assessment at future design and 'as-built' project stages are advisable to enable project teams to fully engage and understand the carbon impacts of the determined project scenario and monitor the carbon budget of the specified materials as the project develops towards practical completion.

The prospective operational demands of Unit 9 are not currently known, therefore, to estimate the future operational carbon emissions of the property, energy benchmarks specified for light manufacturing industrial buildings in CIBSE Guide F, Table 20.20 have been used and current emissions factors from *UK Government GHG Conversion Factors for Company Reporting* (2023) applied.

The CIBSE benchmark for space heating is assumed to be based upon traditional fossil thermal (gas) heating technology which predominates in the UK. However, as Unit 9 is fitted with a Ground Source Heat Pump (GSHP) which will be retained for the purposes of providing space heating and domestic hot water, the site does not use any fossil fuels. Therefore, the space heating energy benchmark stated by CIBSE has been converted to represent the electricity demand for the heat pump, which is conservatively assumed to have a seasonal coefficient of performance of 3.5.

3. Carbon Impact Assessment: Scenario 1 – Retention & Refit

3.1. Project Stage [B4] Replacement & [B5] Refurbishment

This option considers the carbon impact of the proposed changes to the existing building subjects at Unit 9 Forres Enterprise Park, as described in Table 1.

Over the service life of the building, it is recognised that there will be carbon impacts arising from the replacement of building elements items such as roof surfaces, windows, cladding and building systems, as well as from refreshing of interior finishes. The replacements and the associated carbon impacts will occur in cycles depending on the expected length of the useful life and specifications of the original equipment, and the planned alteration or improvement of the physical characteristics of the property to satisfy future function.

Although the Replacement [B4] and Refurbishment [B5] stages are distinct, they coincide for the refit of the 14 year old building and, therefore, are addressed simultaneously in this assessment.

Modules B4 and B5 require that account be taken of any carbon emissions associated with the anticipated replacement of building components or those used in a refurbishment, including any emissions from the replacement and refurbishment activities themselves. Therefore, all emissions arising from the production, transportation to site, and installation of the components used is included in this assessment. This extends to cover any losses during these processes, as well as the carbon emissions associated with the removal and end of life treatment of waste materials.

3.2. Carbon Impact Assessment of Refit

Table 2 Embodied carbon of refit project at completion, breakdown by building element (Unit 9 Forres Enterprise Park)

Retained and refitted Unit 9	Stage [B4] - [B5] emissions tCO2e	Stage [C2] - [C4] emissions tCO2e	Total Refit emissions tCO2e	Estimated tonnes CO2e/m2 GIA
Substructure	0.000	0.000	0.000	0.000
Superstructure	26.587	1.067	27.654	0.026
Finishes	6.647	0.696	7.343	0.007
Services (MEP)	10.438	0.676	11.114	0.010
External Works	16.775	0.396	17.171	0.016
Waste arising from works	0.000	0.095	0.095	0.000
Embodied Carbon of Refit at completion	**60.447**	**2.931**	**63.378**	**0.059**

4. Carbon Impact Assessment: Scenario 2 – New-build construction

4.1. Embodied Carbon Assessment of new construction

As an alternative to refurbishing the current property at Unit 9 Forres Enterprise Park, the following analysis explores the carbon impact associated with constructing a new building.

In line with standard practice, this new build scenario envisions the project taking place on a cleared and level greenfield site, thus excluding the carbon arising from any pre-commencement groundwork or demolition activities from the embodied carbon analysis.

In the absence of an early stage concept or project design brief, the carbon impact assessment is based on the premise that the new building would serve the same functional purpose as Unit 9 and will match it in size and architectural style. Therefore, the estimated carbon impact is calculated using the RICS benchmarks for small to medium light industrial buildings (additional benchmarks are presented below for information only), assuming a gross internal floor area of 1072m^2.

Table 3 Embodied carbon benchmarks, light industrial buildings

Professional body/Benchmark source	Building type	Benchmark embodied carbon T CO2e/m2
Scottish Futures Trust, Embodied carbon benchmarks for new buildings, Table 1	Industrial, median	0.4
RICS, Methodology to calculate embodied carbon of materials, Fig6	Small - medium light industrial	0.435
RICS, Methodology to calculate embodied carbon of materials, Fig6	Large light industrial factory/units	0.52

4.2. Carbon Impact Assessment of new construction

Table 4 Estimated embodied carbon impact, new build property (based on industry benchmarks)

Assumed building type	Benchmark embodied carbon, t CO_2e per m^2	GIA m^2	Estimated embodied carbon
New build - Small to medium light industrial building, steel portal frame	0.435 tCO_2e/m^2	1072	**466 tCO_2e**

5. Operational Energy

5.1. Future Operational Energy Consumption

Operational carbon emissions are those arising from the use of energy in building-integrated systems (such as HVAC, lighting, and auxiliary systems) and unregulated energy use non-building related systems (such as specialist equipment, ICT equipment etc) during the building's [B6] use stage, see Figure 1.

Due to the limited availability of data regarding energy consumption in the current use phase of the building, and the uncertainty surrounding its future function, it is not possible to accurately calculate the future energy demands of the Unit 9 or the alternative new build property. Therefore, energy benchmarks produced by the Chartered Institution of Building Services Engineers (CIBSE) indicating typical energy use in light industrial buildings have been used to forecast future annual energy consumption, as presented in Table 5 below.

5.2. Renewable Energy Generation: Solar Photovoltaic (PV) Array

A preliminary evaluation of the roof structure at the Unit 9 premises within Forres Enterprise Park has been conducted to determine its suitability for the installation of photovoltaic (PV) solar panels. Despite the curvature of the existing roof, the shallow arc is not foreseen as an impediment to the installation of roof-mounted panels as the design of the standing seam pattern in the roof construction is expected to enable the use of a the standard frame mounting system (as used on conventional pitched roofs) allow the panel module to be mounted at an angle to optimise solar irradiation.

Pending a detailed survey of the roof's structural integrity and load-bearing capacity by a qualified engineer, preliminary modelling using satellite imagery of the site indicates the potential for accommodating a solar PV installation with an approximate capacity of 97 kWp. This installation is projected to yield a maximum annual solar energy output of 66,531 kWh. However, it is important to note that a portion of this energy might be generated outside of operational hours, necessitating the integration of battery storage to allow the utilisation of all energy produced.

Based on the typical operating hours of small industrial organisations, it is estimated that up to 40% of the solar energy generated might fall outside of peak demand periods. Consequently, it is conservative estimated that the solar array could supply around 39,920 kWh of usable energy annually. This renewable energy yield would effectively displace emissions linked to grid electricity consumption.

5.3. Carbon Impact Assessment of Operational Energy Consumption

Table 5 Operational emissions - Benchmark: industrial, light manufacturing

Building related energy use	Energy consumption (kWh/m2/yr)	Total energy consumption (kWh/yr)	Annual electricity emissions (kg CO2e)	Annual electricity emissions (tonne CO2e)	Normalised carbon emissions (tCO2e/m2/yr)
Heating (adjusted for GSHP)	103	110373	22855.403	22.855	0.021
Other uses	38	40736	8435.366	8.435	0.008
Process	82	87904	18202.633	18.203	0.017
Subtotal		**239013.12**	**49493.403**	**49.493**	**0.046**

Potential onsite generation from PV solar array installation:

Estimated renewable energy potential	Gross annual generation (kWh/yr)	Net usable annual generation (kWh/yr)	Avoided emissions (tonnes CO2e/yr)	Normalised carbon emissions (tCO2e /m2/yr)
~97 kWp roof mounted solar array	66,531	39,920	8.266	0.008
Net total operational emissions		**199,093 kWh/yr**	**41.227 tCO_2e**	**0.038 $tCO_2e/m^2/yr$**

Appendix A: Results of embodied carbon assessment, Unit 9 Refit

The minimum results required for submission are highlighted in blue.	Global Warming Potential GWP (TCO_2e)																		
* Decarbonisation applicable - Report decarbonised values alongside non-decarbonised ones.	Product stage				Construction process stage		Use stage							End of Life (EoL) stage				TOTAL*	TOTAL* normalised	Benefits and loads beyond the system boundary
	Biogenic (sequestered) carbon	[A]					[B]							[C]				[A] to [C] cradle to grave	[A] to [C] cradle to grave	[D]*
Building element category		[A1]	[A2]	[A3]	[A4]	[A5]	[B1]	[B2]*	[B3]*	[B4]*	[B5]*	[B6]	[B7]	[C1]	[C2]	[C3]	[C4]		($kgCO_2e/m^2$)	
Demolition prior to construction 0.1 Toxic/Hazardous/Contaminated Material Treatment 0.2 Major Demolition Works														0	0	0	0	0	0	
Facilitating works 0.3 Temporary Support to Adjacent Structures 0.4 Specialist Ground Works 0.5 Temporary Diversion Works 0.6 Extraordinary Site Investigation										-	-				-	-	-	-	-	
1 **Substructure**										-	-				-	-	-	-	-	
Superstructure 2.1 Frame 2.2 Upper Floors 2.3 Roof 2.4 Stairs and Ramps										-	16.116				0.047	0.000	0.135	16.298	0.015	
Superstructure 2.5 External Walls 2.6 Windows and External Doors										0.737	1.457				0.002	0.004	0.015	2.214	0.002	
Superstructure 2.7 Internal Walls and Partitions 2.8 Internal Doors										0.101	8.176				0.012	0.003	0.850	9.142	0.009	
3 **Finishes**										6.622	0.026				0.275	0.418	0.003	7.343	0.007	
4 **Fittings, furnishings & equipment**										-	-			building-re	building-related items	building-related items	building-related items	-	-	building-related items
5 **Services (MEP)**	building-relate	building-relatedsystems			building-relat	building-rel	building-re	building-re	building-re	-	10.438			building-re	0.003	0.673	0.000	11.114	0.010	building-relatedsystems
	non building-re	non building-relatedsystems			non building-	non buildin	non buildin	non buildin	non buildin	-	-			non buildi	-	-	-	-	-	non building-related systems
6 **Prefabricated Buildings and Building Units**										-	-				-	-	-	-	-	
7 **Work to Existing Building**										-	-				-	0.020	0.075	0.095	0.000	
8 **External works**										-	16.775				0.433	0.200	0.164	17.171	0.016	
TOTAL										**7.460**	**52.987**	-			**0.772**	**0.918**	**1.241**	**63.378**	**Tonnes CO2e**	
TOTAL - normalised ($tonnes\ CO_2e/m^2$)										**0.007**	**0.049**	-			**0.001**	**0.001**	**0.001**	**0.059**	**Tonnes CO2e/m2**	

* Building-related items: Building-integrated technical systems and furniture, fittings and fixtures built into the fabric. Building-related MEP and FF&E typically include the items classified under shell and core and Category A fit-out.

Appendix 12: Cash drawdown by financial year

	Total	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
CAPITAL											
Capital Spend	5,608,820	444,966	2,287,207	-	1,831,362	1,045,285	-	-	-	-	-
Moray Growth Deal Funding											
HIE	2,557,010	202,856	1,042,717	-	834,901	476,536	-	-	-	-	-
Scottish Government	610,362	48,422	248,898	-	199,292	113,750	-	-	-	-	-
UK Government	2,441,448	193,688	995,592	-	797,169	454,999	-	-	-	-	-
Total	***5,608,820***	***444,966***	***2,287,207***	***-***	***1,831,362***	***1,045,285***	-	-	-	-	-
REVENUE											
Revenue Deficit (to end FY30/31)	1,252,191	47,388	309,173	276,423	254,703	151,580	107,853	100,416	4,655	- 19,607	- 20,097
Moray Growth Deal Funding											
HIE	-	-	-	-	-	-	-	-	-	-	-
Scottish Government	1,250,000	47,388	309,173	276,423	254,703	151,580	107,853	100,416	2,464	-	-
UK Government	-	-	-	-	-	-	-	-	-	-	-
Total	***1,250,000***	***47,388***	***309,173***	***276,423***	***254,703***	***151,580***	***107,853***	***100,416***	***2,464***	***-***	***-***