Apply to the levelling up fund round 2

Submission details

Submission reference	LUF20104
Created time	Wed, 10 Aug 2022 08:40
Signed-in user	b6fb8b65-a78c-4ec2-a27d-2efefbc38ae5

What is the legal name of the lead applicant organisation?

Ashfield District Council

Where is your bid being delivered?

England

Select your local authority

Ashfield

Enter the name of your bid

Science Discovery Centre and Planetarium

Does your bid contain any projects previously submitted in round 1?	No

Bid manager contact details

Full name	Sarah Daniel
Position	Service Manager Place and Wellbeing
Telephone number	[redacted]
Email address	[redacted]
Postal address	Council Offices Urban Road Kirkby in Ashfield Nottinghamshire Ng17 8DA

Senior Responsible Officer contact details

Full name	Theresa Hodgkinson
Position	Chief Executive Officer
Telephone number	[redacted]
Email address	[redacted]

Chief Finance Officer contact details

Full name	Pete Hudson
Telephone number	[redacted]
Email address	[redacted]

Local Authority Leader contact details

Full name	Jason Zadrozny
Position	Leader
Telephone number	[redacted]
Email address	[redacted]

Enter the name of any consultancy companies involved in the preparation of the bid

None

Enter the total grant requested from the Levelling Up Fund

£3100000

Investment themes

Regeneration and town centre	50%
Cultural	50%
Transport	0%

Which bid allowance are you using?

Full constituency allowance

How many component projects are there in your bid?

1

Are you submitting a joint bid?

No

Grant value declaration

I am submitting a bid as a single applicant and can confirm that the bid overall does not exceed £20 million grant value	Tick to confirm

Gateway criteria: costings, planning and defrayment

I confirm that some LUF grant funding will be defrayed in the 2022/23 financial year	Tick to confirm
Costings and Planning Workbook	Ashfield UKSPF Finances.xlsx

Provide bid name

Science Discovery Centre and Planetarium

Provide a short description of your bid

To repurpose a Victorian underground reservoir into a science discovery centre and state-of-the-art planetarium. The new centre will create a truly unique visitor attraction, helping to raise the profile of the area and draw in visitors. A focus on delivering STEM content in an exciting and hands on way will raise awareness of the opportunities that a career in STEM can unlock, particularly in young people – an important aspect of future jobs creation and prosperity in the district. The centre will be owned and operated by MSAS (a registered CIO), which currently owns and operates the adjacent Sherwood Observatory

Provide a more detailed overview of your bid proposal

Numerous studies have demonstrated the important role that science centres and planetariums can have in the visitor economy and as an educational resource. Ashfield lacks any facilities of this kind and also under performs on most measures of educational attainment – a significant barrier to the government's science, technology and levelling up agendas. The intervention will inspire people to take an interest in science, technology, engineering, and mathematics (STEM) through the creation of a Science Discovery Centre and Planetarium (SDC). This will be a pipeline of talented and motivated people –

part of a ‘golden thread’ than runs through the Towns Fund programme - and a unique visitor attraction that will be an important part of the visitor economy. The SDC will be owned and operated by the MSAS CIO. MSAS has a strong track record of delivering community outreach over several decades and currently turns away significant requests for visits to its observatory due to lack of capacity.

The SDC will be created from a disused underground Victorian reservoir, thereby restoring a local heritage asset to beneficial use. The entrance will be via a mezzanine level where visitors will immediately be rewarded with views of the refurbished reservoir. From there they will either go down to the reservoir floor itself to use meeting rooms and an exhibition area, or up to a café and reception area that will lead into a state-of-the-art 10m planetarium dome. A unique selling point is the co-location of the planetarium with Sherwood Observatory, which houses what we believe to be the largest public access telescope in the UK. Visitors will be able to learn about the night sky in the planetarium and then see it with their own eyes in the observatory next door. The planetarium, being a high-resolution digital projection system, has been specified to show a wide range of STEM content and can also be used for visual arts or as a community theatre.

The total project cost is currently estimated to be £6.35m (including VAT, inflation, and contingency). This will be funded through a combination of Levelling Up investment and other sources including grants/trusts, businesses, benefactors and public subscription.

A business model has been developed that demonstrates that the SDC can be operated in a financially sustainable way using both paid FTEs and community volunteer effort based on a conservative estimate of annual visitor numbers of circa 21,000. Local further education and higher education providers see the new Centre as an opportunity for work experience for their students, further enhancing the value of the centre to the community. A consultation exercise has shown strong support for the project, with many local schools indicating that they will use the facilities for educational enrichment.

The project is currently at RIBA Stage 3 (detailed design) and, subject to achieving the funding target and planning permission, construction can start in Q2 of 2023/24 and open in Q3 2024/25. Feedback has been received at planning preapplication stage and no insurmountable barriers have been identified.

Provide a short description of the area where the investment will take place

Kirkby in Ashfield and Sutton in Ashfield are historic market towns located 3.5 miles apart in the heart of England and are home to proud communities and businesses. The investment will be conveniently located between these two towns. The towns are situated between the cities of Nottingham and Derby to the south and Sheffield to the north. Lying in Mid-West Nottinghamshire, Kirkby and Sutton are close to the Derbyshire Peak District and with excellent connectivity adjacent to the M1 and A38 network. The two towns are steeped with a rich industrial and cultural heritage, former industrial strengths were based on mining and manufacturing, particularly hosiery. Both towns have significant challenges both visible and unseen, falling well below the average of most national indicators. Town centre decline continues, with years of under investment making it hard for business to succeed, health inequalities are prevalent, low skills result in low-income levels, with poor social mobility and opportunity is therefore limited. The Covid-19 pandemic has compounded these challenges impacting on key sectors such as manufacturing with reduced output due to social distancing requirements and the acceleration of automation.

Kirkby and Sutton has proven to be a diverse and resilient community in the face of industrial decline, willing to embrace new opportunities in the economy and with an entrepreneurial spirit. Investment is needed to support our programme of work, to reduce barriers to growth and development, and demonstrate market confidence to encourage the private sector to invest. With appropriate investment, the Ashfield area can be regionally recognised as a

	place which nurtures and provides opportunity for current, future and returning generations, places people and businesses choose to live, work, study, and visit.
Optional Map Upload	

Does your bid include any transport projects?

	No

Provide location information

Location 1	
Enter location postcode	NG17 5LF
Enter location grid reference	SK 52150 57711
Percentage of bid invested at the location	100%
Optional GIS file upload for the location	

Select the constituencies covered in the bid

Constituency 1	
Constituency name	Ashfield
Estimate the percentage of the bid invested in this constituency	100%

Select the local authorities covered in the bid

Local Authority 1	
Local authority name	Ashfield
Estimate the percentage of the bid invested in this local authority	100%

Sub-categories that are relevant to your investment

Select one or more regeneration sub-categories that are relevant to your investment	Other Regeneration
Describe other regeneration sub-category	A key aim of the investment is to encourage young people to follow STEM based career paths. This will be key to the regeneration of the area as local

	businesses require a pipeline of talented, educated people to grow and prosper
Select one or more cultural sub-categories that are relevant to your investment	Visitor Economy Heritage buildings and sites

Provide details of any applications made to other funding schemes for this same bid that are currently pending an outcome

There are no applications pending. However, if the LUF bid is unsuccessful we will apply to the National Lottery Heritage Fund. We are due to have a meeting with NLHF and our local MP (Lee Anderson) to explore development of the bid.

Provide VAT number if applicable to your organisation

Bidders are invited to outline how their bid will promote good community relations, help reduce disparities amongst different groups, or strengthen integration across the local community

The existing Sherwood Observatory was built by the local community for the local community over 11 years from 1972 to 1983. Since then it has served as a hub for members of the community that are interested in science and technology in general and astronomy in particular. However, visitor numbers are severely limited by capacity restrictions. This new intervention will increase capacity by greater than a factor of 7, thereby improving accessibility. The intervention will promote equalities in a number of ways:

i) The price point for all day school visits has been set at the lowest level suggested in responses to our consultation exercise. This will ensure that all schools have access. We anticipate receiving small grants from science institutions for schools that are unable to afford the proposed price point. This price point could not be sustained without grant funding for the capital investment as it has been set significantly lower than would be required to service an equivalent debt.

ii) As well as delivering science content, the new Centre has been designed to accommodate arts provision. Local groups, individuals and schools will be able to develop their own content to display on the planetarium dome. Also, the exhibition space will be available for community use.

iii) A key part of the organisational design has been to ensure that the Centre is operated by the community for the community. Current MSAS members and volunteers come from all walks of life and the age range covers junior school to the person who founded the organisation in 1970 and is still a member. Having STEM content delivered by your own community is known to increase impact.

iv) We will be providing curriculum enrichment activities and work experience opportunities through partnerships with the two main further education providers (ATTFE and West Notts. College).

v) Open events and group visits are available to all members of the community. Volunteering opportunities will be opened up to the whole community. A particular highlight of the current (limited) outreach is the positive interaction between young children and older adult volunteers.

vi) Public surveys show a strong interest across all age ranges and an

approximately 50:50 mix of sexes. The new facilities will provide an opportunity to showcase careers in STEM subjects, helping girls in particular to gain confidence and skills and highlight the opportunities available.

vii) The physical design includes a Changing Places toilet. Planetarium shows will be adaptable for neuro-diverse audiences (for example, shows where the audience is not expected to be still or silent, or where the sound and motion are more subdued). Closed caption glasses will be available for those who have impaired hearing. All of the facilities will be wheelchair accessible.

Is the support provided by a 'public authority' and does the support constitute a financial (or in kind) contribution such as a grant, loan or guarantee?

Yes

Does the support measure confer an economic advantage on one or more economic actors?

No

Provide further information supporting your answer

The Council

N.

The Council will simply be passing through the funding to unconnected third parties. It is doing so as part of its public functions (i.e. this is a non economic activity) and the Council is receiving no net benefit from the funding so will not receive an economic advantage from it. It will not be receiving a subsidy under the UK-EU Trade and Co-operation Agreement as incorporated into UK law (the TCA) or the Subsidy Control Act 2022 (the Act).

The Mansfield and Sutton Astronomical Society (MSAS)

The following information sets the scheme for the subsidy control analysis.
MSAS currently owns and operates the adjacent Sherwood Observatory. The proposed development is on land owned by MSAS. MSAS will own and operate the proposed development.
It is a registered Charitable Incorporated Organisation – i.e. a registered charity. Its trustees are recruited from the scientific, education and local business communities. Its members comprise members of the public interested in astronomy, who pay an annual subscription fee.

MSAS is primarily funded through member subscriptions, fundraising events and open evenings held at the observatory, plus charitable donations from local industry and grants.

The proposed Science Discovery Centre and Planetarium will be based on an existing Victorian underground reservoir, which will restore a local heritage asset to beneficial use.
There will be meeting rooms, an exhibition area, a café and reception area that will lead into a state-of-the-art planetarium dome.

The purpose of the project is to assist the visitor economy and to provide an educational resource.
The total project cost is currently estimated to be £6.25 million. The total amount of LUF funding would be £3 million and the remainder funded through a combination of grants/trusts, businesses, benefactors and public subscription.

Local businesses will make a financial contribution, provide pro bono support, or supply materials free to the project, or at cost, but this will not raise the capital for the investment in this way alone. Given the financial value of its current assets, it is very unlikely that MSAS could raise the capital for the

investment through debt/loans. Even if it could, the price points for the educational provision etc. would have to be set significantly higher in order to service the debt and the potential loss of the existing facilities (if the debt could not be serviced) would be an unacceptable risk to the charity.
If the centre can be funded as above, it can be operated in a financially sustainable way using both paid workers and community volunteer effort. Local FE and HE providers will also use the centre as an opportunity for work experience for their students.

All income generated from operation of the centre would be re-invested.

Under the TCA

N.

MSAS, as the recipient of grant funding would be benefiting from financial assistance from public sources.

In general, however, the public funding of cultural infrastructure (which should include scientific cultural infrastructure of this type) should not, in principle, amount to a subsidy under the TCA (on the basis of there being no economic advantage to the recipient).

The Commission published an analytical grid dealing with the treatment of the funding of culture under the State aid rules and this reflected case law. This approach derives from the view that cultural activities for which infrastructure is used are normally organised in a non-commercial way or are objectively non substitutable, thus excluding the existence of a genuine market; therefore they are not economic in nature and thus the funding of such infrastructure will not be considered as a state subsidy. So, public funding of cultural infrastructure that is accessible to the general public free of charge will fulfil a purely social and cultural purpose which is non-economic in nature. However, the Commission also said that the fact that visitors of cultural infrastructures open to the general public are required to pay a monetary contribution only covering a fraction of the true costs does not alter the non-economic nature of the culture activity conducted in the infrastructure, as it cannot be considered as genuine remuneration for the service provided (and this would include subsidised planetariums/science centres). In contrast, cultural activities predominantly financed by visitor or user fees or by other commercial means (e.g. commercial exhibitions, cinemas, commercial music performances) should be qualified as economic in nature.

As set out above, the centre will not support itself from commercial income, in that it cannot fund the construction of the centre from its “commercial” income and will, in any event, to some extent remain reliant on volunteer participation.

On this basis, the culture activities carried out at the centre will be non-economic and the funding of the construction works, insofar as it benefits those activities will not provide an economic advantage to MSAS.

There will be some use of the centre for economic purposes e.g. the café.

The Commission has noted that if cultural infrastructure is used for both economic and non-economic activities (e.g. cafes, the organisation of conferences and commercial events in museums or culture centres), public funding will fall under State aid (and thus subsidy control) rules only insofar as it covers the costs linked to the economic activities in question. In such cases, the public funding provided for the non-economic activities should not be used to cross-subsidise the entity's economic activities. This can notably be ensured by limiting the public funding to the net cost (including the cost of capital) of the non-economic activities, to be identified on the basis of a clear separation of accounts.

However, in cases of mixed use, the funding of cultural infrastructure that is used almost exclusively for a non-economic activity, may fall outside the State aid (and thus subsidy control) rules in its entirety, provided the economic use remains purely ancillary, that is to say an activity which is directly related to and necessary for the operation of the cultural infrastructure, or intrinsically linked to its main non-economic use. This should be considered to be the case when the economic activities consume the same inputs as the primary non-

economic activities, for example material, equipment, labour or fixed capital. Ancillary economic activities must remain limited in scope, as regards the capacity of the infrastructure. In this respect, the economic use of the infrastructure has been considered ancillary (at least under the State aid rules) when the capacity allocated each year to such activity does not exceed 20% of the infrastructure's overall capacity. So, where economic activities (as opposed to cultural or educational ones) or the café occupy less than 20% of the centre's capacity, then they can, in essence, be treated as non-economic activities by reason of the Commission's analysis.

The economic activities should consume the same inputs as the primary non-economic activities and the economic use of the centre (i.e. the café – and potentially any hiring out of meeting rooms) will amount to significantly less than 20% of its overall capacity (measured by floor area). On that basis, therefore all its activities are likely to be non-economic and hence the funding will not (even indirectly) result in an economic advantage to MSAS.

It would be reasonable to expect the interpretation of the TCA subsidy control rules to be consistent with the approach under the State aid rules.

Under the Act

N.

The starting point here is the proviso to the definition of an enterprise in section 7(2) of the Act, which states that an activity is not to be regarded as economic activity if or to the extent that it is carried out for a purpose that is not economic.

The Government's draft Guidance on the Subsidy Control Regime in essence reiterates the position under the State aid regime. It makes it clear that where public authorities provide financial assistance in support of a person or body's non-economic activities, such financial assistance will not be considered to constitute a subsidy where it is ensured that the financial assistance cannot be used to cross-subsidise the person or body's economic activities. This can be ensured by the use of a clear separation of accounts.

The draft Guidance notes that cultural activities which can be accessed by the general public free of charge will not be considered to constitute an economic activity for the purposes of the Act, but the fact that the public are required to pay a fee in order to access cultural activities does not necessarily entail that these activities are commercial in nature. The key consideration is whether the cultural activities are principally financed through public resources or through the fees paid by the public. Where a cultural activity is primarily funded through the fees paid by the public, that activity will be considered to be economic in nature. In the case of the centre, as noted about, its construction could not be funded through the fees paid by the public and this is the primary cost for MSAS – accordingly the provision of activities at the centre should not be considered to be an economic activity.

For completeness, the draft Guidance states that where the costs of education services are principally funded, whether directly or indirectly, through public resources, those services will not be considered to be an economic activity despite the fact that students, or their families, pay fees toward the provision of those services. However, where education services are principally funded through private resources, for example the resources of students and parents, or through the operator's own commercial revenues, the operators providing these services will be considered to be enterprises for the purposes of the Act. It is not clear whether schools will pay for the visits or whether they will be funded by parents. While there will clearly be educational benefits to the engagements by the centre with schools, the visits fall more clearly within the ambit of cultural activities and should be treated as such.

The draft Guidance goes on to note that in some instances, bodies may perform economic activities which are ancillary to a primary non-economic activity. Where it is shown that economic activities are intrinsically linked or are directly related and necessary for the performance of the noneconomic activity, and where such economic activities are limited in scope, such activities will not be caught under the subsidy control regime. Financial assistance for amenities for traditional non-economic cultural infrastructure sites (such as a café, gift

shop or parking at a museum) are also unlikely to be caught under the subsidy control regime since those customary amenities are unlikely, in themselves, to attract customers from other parts of the UK or internationally unless they are visiting the facility to which the amenities are attached. This will clearly be the case as far as the centre is concerned.

Accordingly, financing of the construction of the centre as a site used for activities related to culture and heritage (i.e. the Victorian reservoir) should not fall within the scope of the Act as it is not intended to be commercially exploited.

Individuals benefiting from use of the centre

N.

Various individuals will have the use of the centre e.g. school groups, young people and so and the pricing is intended to be relatively low. It is highly unlikely that any such individuals will receive an economic advantage as, generally, individuals will not constitute economic actors (under the TCA) or enterprises (under the Act) for subsidy control purposes.
The same will apply to parents, if parents fund school visits.
Subsidies to schools

N, but potentially Y for private schools.

As noted above, there will be school visits. To the extent that the schools do not pay a “full market price”, there will be no subsidy to the schools, on the basis that the schools are carrying out a non economic activity (assuming that the schools are publicly funded). Where a school is fee paying, there may be an argument that it is receiving an economic advantage by reason of a lower than market price (which is ultimately funded by public resources).

Contractors and other providers involved in the project

Y.

Only insofar as contractors and providers will be paid for the provision of works, goods and services.

Is the support measure specific insofar as it benefits, as a matter of law or fact, certain economic actors over others in relation to the production of certain goods or services?

No

Provide further information supporting your answer

The Council

N.

See above for the rationale for this in each case under the TCA and the Act.

MSAS

N.

See above for the rationale for this in each case under the TCA and the Act.

Individuals benefiting from use of the centre

N.

See above for the rationale for this in each case under the TCA and the Act.

Subsidies to schools

N

See above for the rationale for this for state funded schools under the TCA and the Act.

As far as private schools are concerned, there is a reasonable argument that if all schools have the opportunity to visit on the same terms then a particular school will not be receiving a specific economic advantage (and thus no subsidy).

Contractors and other providers involved in each project

N.

MSAS decided to select the contractor for the works, through competitive tender, from those that had already prequalified under an existing SCAPE framework agreement (i.e. a framework procured under the Public Contracts Regulations 2015).

The main contractor was appointed in June 2021 and then proceeded to run a competitive tender exercise to select a core design team consisting of an architect, structural & civil engineer, and specialist planetarium provider. The design team costs have therefore all been fixed through to the end of the project. As part of the selection process, the specialist planetarium provider was asked to tender for their element of the construction phase capital costs. Whilst this was done to aid selection of the design team, as recently as April 2022, they have confirmed that their costs still apply. MSAS's contract with them retains the right to re-tender this element of the work should their estimated costs significantly change.

The Project Management and Consultancy support for the MSAS project manager has also already been tendered and the costs fixed through to the end of the project.
Accordingly, MSAS will not pay more than market rates or contract on better than market terms with any contractor or provider, who will not receive a specific economic advantage and will not therefore receive a subsidy.

Does the support measure have the potential to cause a distortion in or harm to competition, trade or investment?

No

Provide further information supporting your answer

The Council

N.

As set out above, the Council is not behaving as an economic actor or an enterprise.

MSAS

N.

As set out above, MSAS is not behaving as an economic actor or an enterprise.

Individuals benefiting from use of the centre

N.

As set out above, individuals will not be behaving as an economic actor or an enterprise.

Subsidies to schools

As noted above, schools will either be engaging in non economic activity or will not receive a specific economic advantage from any arrangements with MSAS so there should not be a subsidy granted as an indirect result of the funding.

There should therefore be no distortion in or harm to trade, competition or investment.

Contractors etc.

N.

They will not be receiving a specific economic advantage as a result of the LUF funding. Accordingly there should be no potential to cause a distortion in or harm to competition, trade or investment.

Will you be disbursing the funds as a potential subsidy to third parties?

No

Has an MP given formal priority support for this bid?

Yes

Full name of MP	Lee Anderson
MP's constituency	Ashfield
Upload pro forma 6	Proforma 6 Sherwood Observatory MP support.docx

Describe what engagement you have undertaken with local relevant stakeholders. How has this informed your bid and what support do you have from them?

Supporting survey data and a stakeholder matrix are described in Sections 5.2.3 (pages 57-63) and 7.2.3 (pages 97-102) respectively of the attached Business Case.

During concept development, visitors to the existing Observatory were asked to complete questionnaires about the proposals. 257 of 258 respondents said that they supported the proposals with 97.7% saying that they would be likely to visit. In an on-line questionnaire, 408 of 412 (99%) supported the proposals. Schools in Nottinghamshire and East Derbyshire were contacted and asked if they would be interested in sending classes, with 84 positive responses. Feedback from some schools was that all day visits would be required to make the journey worth-while. This has been factored into the operational and physical design. Comparator organisations were reviewed, and direct discussions held with some of them (e.g. Centre for Life, Newcastle Upon Tyne) to inform the business plan and physical design.

In February 2020, the proposals were presented to the Discover Ashfield Board (who represent a wide range of business, community, and public sector bodies, including academies, further education) and were given broad support. In November 2021, a project launch event was held for businesses and other local stakeholders - the majority of attendees joining virtually due to Covid-19 protocols. A recording of the event was posted on our YouTube channel for the benefit of those that could not attend.

Following further design work, another public survey was conducted in 2022. Participants were also asked if they would also be interested in attending music and arts-based shows, with an 87.9% return of ‘very likely/likely’. Participants were also asked about price point and these data were used in the operational business plan. As a key stakeholder, a detailed local schools consultation is currently underway. All schools who responded reported that they support the proposal and that school access to STEM teaching is extremely important. The total number of visits proposed from the schools who have responded so far is 76 per annum, with most preferring a full day visit.

The schools were also asked to indicate what they considered to be a reasonable price point for a class visit. The mean price for a full day was £238.75 and the minimum £150. The mean for a half day visit was £145. Based on these data, this lower day visit value of £150 has been used in the business plan modelling to maintain conservative assumptions and to reflect that the Centre has an aim to be as inclusive as possible.

A project board has been established that includes the Principal of ATTFE, a local FE college, and a local business leader. Discussions have been held with another FE provider, West Notts. College, who see significant opportunities for the new centre to support workplace training for students.

A meeting has been held with the local MP who is supportive of the project.

Letters of support from local stakeholders, BBC Sky at Night presenter, Professor Chris Lintott, and the president of the International Planetarium Society are attached.

Has your proposal faced any opposition?

There has been no opposition to these proposals

Do you have statutory responsibility for the delivery of all aspects of the bid?

Yes

Provide evidence of the local challenges / barriers to growth and context that the bid is seeking to respond to

The area is facing a skills gap in STEM qualified people required to grow prosperity. One issue is the lack of appeal of STEM related subjects. For example, 62% of 16- to 17-year-old students in the UK felt that STEM subjects such as science and maths are more difficult than non-STEM subjects (1). Incentivising further education and higher education and assisting those who pursue this academic direction is key in addressing the STEM skills gap. Ashfield is already marked by existing regional differences in education attainment (2) with education and skill indicators placing it within the lower tier of the education sectors (pre-primary, primary, secondary, further, higher and adult skills) as it is ranked 310th out of 379 local authority areas in the UK (3)

With regards to adult skills, Ashfield ranks at 371 with only 21.2% of the adult population with at least NVQ level 4 qualifications as opposed to 39.9% for the UK average. 8.4% of the residents do not hold a qualification as opposed to the East Midlands average of 6.2%. When looking at average salary (one of the effects of low education levels), Ashfield is also well below the national average at £27,690.
Furthermore, Ashfield ranks as one of the lowest performing districts for social mobility indicators (cold spots), ranking 316 out of the total of 324 districts in the UK (4)

High-quality learning has a big impact on economic well-being as it is strongly linked with higher earnings, lower chances of becoming unemployed, better health and reduced crime. For Ashfield to achieve its 10-year Education and Skills Improvement Plan (2022-2031), renewed focus on education and adult skills is required. Visitor feedback for the existing facilities has demonstrated that the proposed development can create a sense of awe and wonder around STEM based learning and it is to be expected that this will lead to greater engagement in more formal STEM learning and therefore career opportunities.

With regard to culture and tourism, currently, Ashfield has limited offerings to

attract domestic tourism from the Midlands and beyond, yet attractions within the adjacent districts have demonstrated that they can draw considerable visitor numbers (5,6). Attracting domestic tourism within Ashfield district is therefore a realistic proposition if a compelling visitor site exists. The proposed development would be a regionally, and perhaps nationally, significant visitor attraction that would draw people to the area and also create a sense of pride of place for the local community. Experience from operating the existing Observatory has demonstrated that there is an unmet demand for such an attraction, as prior to the introduction of Covid-19 restrictions, visitors were being turned away due to lack of capacity despite minimal marketing.

References

1) Engineering UK 2020 Educational Pathways Into Engineering
2) Commission on Inequality in Education 2017
3) Ashfield's 10-year Education and Skills Plan (2022-2031).
4) Social Mobility Commission State of the Nation 2017
5) Association of Leading Visitor Attractions 2020
6) Nottingham City Council 2019

Explain why Government investment is needed (what is the market failure)

The vision for the investment is to create a Science Discovery Centre and Planetarium that will help to inspire a new generation of scientists and engineers from across the region. It will also create a unique visitor attraction that will draw people to the area.

Although local businesses will benefit from a better qualified, STEM enabled, workforce, as with formal state education, it is not possible to link improved educational attainment of a population directly to the profitability of an individual company. Similarly, the local economy in general will benefit from spend from greater visitor numbers. These benefits will be spread over a lot of organisations, many of which are SMEs. Whilst local businesses are supportive of the project, with many being willing to make a financial contribution, provide pro bono support, or supply materials free or at cost to the project, it will not be possible to raise the capital for the investment in this way alone. Even if local businesses could provide the initial investment, it would be impossible to apply an equitable distribution of costs across all of the businesses that might benefit in the future from an area wide improvement in educational attainment and visitor numbers. The only viable option is therefore for government and other sources of grant funding (including private sector grant awarding bodies) to cover the capital costs. The benefits of the investment would then emerge as greater business growth and prosperity in the area as a whole. It should be noted that the BCR of the public sector investment is favourable when considering the visitor economy and employment benefits alone, without monetising the work experience and educational benefits.

The new development will be operated by the MSAS CIO. This is a not-for-profit organisation, with all income generated from operation of the facilities being re-invested. Whilst the price points in the business plan have been set to ensure that the new Centre is financially sustainable once in operation without further public sector investment, they have been set relatively low in order to maximise the number of visitors, particularly from schools. Given the financial value of its current assets, it is very unlikely that MSAS could raise the capital for the investment through debt/loans. Even if it could, the price points would need to be set significantly higher in order to service the debt, pricing the audience that we are trying to attract out of the market. Servicing the debt would also present a significant risk to the charity.

Explain what you are proposing to invest in and why the proposed interventions in the bid will address those challenges and barriers

The investment is to construct a Science Discovery Centre and Planetarium,

reusing a redundant Victorian underground reservoir on land adjacent to the existing Sherwood Observatory. The proposed investment and location has been assessed using the critical success factors (CSF) approach described in the HM Treasury Green Book. Tables showing the CSFs, key criteria for assessing the options and the assessment of the options are shown in Section 4.2 (pages 30-35) of the Business Case based on a long list of five potential options.

A 2009 report by the British government (1) concluded that science centres may improve people's understanding of scientific issues, change people's attitudes, and encourage children to pursue careers in science.

The same report also showed of science centre visitors that:
1. 59 % learnt more than expected.
2. 43 % evoked thoughts about science.
3. 12 % reported change of attitudes towards science.

In fact, a recent study has shown that science centres are more effective in developing scientific process skills than schools and similar institutions. (2) Also, an extensive international study on the impact of science centres in 2014 (3) collected data from 17 centres in 13 countries, interviewing 13,558 persons. The results support the contention that individuals who used science centres were significantly more likely to be science and technology literate and engaged citizens. The more frequent, the longer and the more recent the science centre experience, the stronger the correlation for all outcomes. Another study (4) published in 2019 showed that visiting a science centre correlated with positive effects in adults' knowledge, participation and interest in science and technology.

It has been discovered that participants in activities in a planetarium have increased academic achievement and that the activities have an effect on eliminating the misconceptions of the students (5).

Also, it has been shown that teaching concepts in a planetarium environment was more effective than in a classroom environment. It was also revealed that students in the planetarium-assisted group were more successful in comprehending subjects that require 3D thinking and a reference system (6). Furthermore, classroom learning coordinated with planetarium lessons show the most gains in knowledge and retention (7). Finally, the planetarium experience can be an important gateway to learning for children with learning disabilities such as children who dislike learning in formal environments (8) or with short attention spans (9).

Science-based centres and exhibitions are known to draw a lot of visitors in the UK. For example, space exploration played an important role in several museums that had record years prior to the pandemic. The volunteers at Sherwood Observatory have seen direct evidence of this, with their exhibition at Mansfield Museum to celebrate the 50th anniversary of the first manned Moon landing, attracting in excess of 12,800 visitors over the summer of 2019.

References

1) Frontier Economics (2009)
2) The Investigation of the Effect of Visiting Science Centre on Scientific Process Skills. Procedia - Social and Behavioral Sciences 197 (2015) 1312 – 1316.
3) International science centre impact study. Final report by John. H. Falk et al. (2014)
4) The role of science identity in science centre visits and effects. Science Education Volume 103, Issue 6. (2019)
5) European Journal of Education Studies (Vol 5, No 2, 2018).
6) The Effect of Planetariums on Teaching Specific Astronomy Concepts (Journal of Science Education and Technology volume 24, pages1–15 (2015).
7) Plummer, Julia D. and Small, Kim J. (2014) "Integrating Planetarium and Classroom Instruction to Engage Children in the Practices of Science." In Ensuring STEM Literacy: A National Conference on STEM Education and Public Outreach. Astronomical Society of the Pacific Conference Series, pp. 407-410.
8) Renninger, K.A. (2007) "Interest and Motivation in Informal Science

Learning. IEEE Computer Society Press.
9) Plummer, (2009), ibid, pp. 192-209

Upload Option Assessment report (optional)

How will you deliver the outputs and confirm how results are likely to flow from the interventions?

A logic diagram for the intervention has been developed and is shown on page four of the attached Business Case.

There are a number of Theory of Change impacts that this project will generate:
A number of new formal and informal partnerships with schools, local colleges and the area's universities will be extended and developed around the delivery of practical, real world, learning projects. Evidence of this can already be seen during the current phase of the project where four students from Nottingham Trent University are supporting public engagement activities associated with the proposals; two students from the University of Nottingham have been supporting development of the marketing campaign; and students from West Notts College are developing a website for the new Centre. West Notts College will be using the new facilities to give their catering, tourism and STEM students work experience opportunities.

The resulting development will offer opportunities for enhanced community engagement not only as learners, but also as volunteers in new roles that will be created. Membership of MSAS is expected to grow as people are attracted to the new facilities and associated opportunities. For members and volunteers, it will help deliver improved skills in business management, financial planning, interpersonal skills (e.g. presentation skills), and people management. This will make them more valuable to employers and potentially lead to enhanced opportunities for individual career development.

The project will also develop a range of new formal and informal partnerships, both with other heritage and visitor attractions that operate in the area, and local companies and businesses that will help raise the profile of the project within the local area as the project will make a contribution to the area's visitor economy.
Community engagement will be enhanced as the attraction itself, and the publicity around its creation, will bring the project to wider public attention and engage more diverse audiences than previously. The Centre in general, and in particular the exhibition space, will be used as a hub for a range of community activities.
There will be three primary measures of success as follows.

1. Delivery of the operational facilities within the budget specified in this application.

2. Sustainable operation of the science discovery centre and planetarium once opened. The business plan modelling and potential customer surveys discussed elsewhere in this proposal indicates that this is achievable.

3. Achievement of the output and outcome metrics agreed with Government for the Towns Fund programme. These are summarised in Table 3.2 (page 23) of the Business Case. A longer list of Input and Output measured developed as the project has progressed are given in Table 7.4 (page 119) of the Business Case.

Theory of change upload (optional)

Set out how other public and private funding will be leveraged as part of the intervention

A funding strategy has been developed for the project that consists of the following elements:

Businesses: Feedback from a launch event in November 2021 was that specific funding packages need to be in place before approaching businesses for donations. A funding prospectus model has been developed based on discrete valuations for specific assets that businesses can select from, as well as a ‘main sponsor’ package on a POA/negotiated basis. This will be rolled out once the cost plan has been completed, but the initial prospectus is shown in the attached ‘prospectus’ annex.

Grants/Trusts: This category covers the Towns Fund and Levelling Up round 2 investment, as well as income from private sector grant awarding bodies and trusts. Private sector grant/trust holders with a good match between their aims and those of this project have been identified. Examples include various educational trusts such as the Garfield Weston Foundation. Some require that more than 50% of the total cost is raised before applying, others require that planning permission is granted before applying.

Public Subscription: This covers large numbers of relatively low value donations provided in exchange for some form of personal recognition or token of appreciation. Benefits for different values of donation include a) a named virtual brick to be displayed in the planetarium before a show; b) a small gift (e.g., limited availability pin badge); c) numbered astrophotography print from a renowned astrophotographer; d) sponsor a planetarium seat. The advice from fundraising specialists is that this phase should be launched when ~90% of the funding has been secured from other sources so that members of the public feel that their contribution will be meaningful.

Benefactors: High net worth individuals with an interest in promoting STEM education. The project board and others are using their networking connections to engage with potential donors, initially on a one-to-one basis, with significant interest being shown.

Whilst there is uncertainty around the relative contribution from each of the above groups to the total cost, an approximate assessment of the split has been made using currently available information as follows: a) Towns Fund, £2.25m, b) Phase 2 levelling up (this application), £3.1m; c) private sector grants and trusts, £800k; d) benefactors, £60k; e) businesses, £60k; f) public subscription, £69k; g) ADC, £11k. This assessment assumes that this application will be successful.

The design phase (to RIBA 3) and some ancillary consultancy costs (review of potential funding sources and specialist economic analysis support for the business case) are already fully funded from a combination of a Towns Fund early release grant, a contribution from Ashfield District Council, business donations, a Further Education college and individual donations.

Some businesses have already offered indirect support. For example, a major door manufacturer has offered to supply some doors as a donation and others at a substantial discount. Pro bono and volunteer support has provided by a number of companies and individuals so far (current total over 2000 hours), but this has not been monetised or included in the total project budget.

Explain how your bid aligns to and supports relevant local strategies and local objectives for investment, improving infrastructure and levelling up

The Ashfield District Council Corporate Plan has a vision to “develop a greater sense of place maximising the areas assets to support business growth and investment”, “make Ashfield a location and destination of choice for businesses and visitors and a desirable place to live for all residents” and “to increase the number of higher skilled/higher paid jobs”. An aim is to “In partnership, identify and facilitate routes to improved skills and employment”. The proposed Science Discovery Centre and Planetarium (SDC) supports this vision and aims, both through the creation of a unique visitor attraction and through being a centre for inspirational learning.

The Kirkby-in-Ashfield and Sutton-in-Ashfield Town Investment Plan identifies the need to deliver more education opportunities and new cultural and visitor facilities. It notes that there are “significant and persistent issues with low educational attainment” in these areas. Located between these two important towns, the new SDC will be ideally placed to support improvements in educational attainment.

Ashfield’s 10-year Education and Skills Plan (2023-2033) notes the low baseline of educational attainment and highlights that key skills needs include functional skills in English and maths, digital skills and high-level skills (graduate retention). The inspirational approach to informal education offered by the SDC will encourage learners to follow STEM career paths and volunteering opportunities will support interpersonal, management and digital skills development. Schools and other community users will have an opportunity to design their own planetarium shows, both with STEM content and arts content, an ideal vehicle for digital skills development.

Ashfield’s Economic Recovery Plan, Responding to Covid-19 (2020) seeks to ensure that the area has the strongest platform possible for recovery by “accelerating progress to … transform productivity and prosperity” and “support the levelling up agenda within the wider region”. Priority areas 3 (skills and training) and 7 (supporting Ashfields residents and workforce) are a good fit with the ambition for the new SDC.

Discover Ashfield has a vision to:
• Promote Ashfield in a positive manner
• Encourage and promote inward investment
• Help people improve their health and wellbeing
• Support tourism and the visitor economy
The SDC directly supports the 1st and 4th of these and can also have an influence on the 2nd and 3rd by improving educational attainment and creating a community resource respectively.

At a regional level, the Midlands Engine Strategy notes that there is a shortage of skilled workers and focuses on objectives that include “strengthening skills” and “enhancing the quality of life to attract and retain skilled workers as well as to foster the local tourist economy”.

Finally, the D2N2 Vision 2030 includes an action to “Inspire young people to make well informed choices about their education, training and careers”. By promoting STEM, the SDC is an excellent fit with this aim.

There are no other facilities in the area that offer the mix of inspirational educational and visitor experiences that meet all of the strategic plans and objectives described above.

Explain how the bid aligns to and supports the UK Government policy objectives

The 2022 Levelling Up White Paper highlights geographical inequalities across the UK and sets out a strategy to address them by improving productivity, boosting economic growth, encouraging innovation, creating good jobs, enhancing educational attainment, and renovating the social and cultural fabric of those parts of the UK that have not so far shared equally in our nation’s success. Of the six ‘capitals’ described in the paper, this intervention supports Human Capital through development of the skills and experience of the work force; Social Capital through strengthening communities by creating a community resource that everyone can be proud of and participate in; and Physical Capital by creating a truly unique visitor attraction that will draw visitors to the area.

Investing in science and technology is key to governmental policies to support economic growth.

The creation of two new government science structures: the National Science and Technology Council and the Office for Science and Technology Strategy, highlights the nation’s renewed focus on science and technology with the

stated objective of making the UK a global science superpower.

In addition, the BEIS released its Innovation Strategy in July 2021, which states that:

“In recovering from the pandemic, we must build on this country’s innovative foundations to create a robust and agile economy that works for everyone and is fit for future generations. Investment in innovation will be critical to achieving this, and to building a greener, healthier and more prosperous future for the UK”
and:
“The current information revolution will accelerate the demand for technological skills. For example, the spread of automation and AI will drive productivity in some sectors but also displace some lower skilled jobs. The demand for highly skilled labour will increase, as R&D and innovation become critical in a future tech-led economy and the new major infrastructure investments.”

At the core of our project is the aim to inspire the next generation of scientists and engineers. Skills that will be required both on a local and national level to achieve this policy.

The project addresses climate change and the target to achieve net zero carbon emissions by 2020 in two ways:

I. Astronomy outreach provides an ideal vehicle for educating visitors about climate change and other environmental issues. The impact of carbon dioxide emissions on global warming can readily be illustrated through comparison of the temperatures and atmospheres of different planets (e.g. Venus). Myths such as the assertion that the warming is caused by changes in solar output can be debunked. Highlighting that Earth is the only place in the Cosmos where we know that life exists often leads to a greater respect for our ecosystems.

II. At its core, the proposed intervention returns an existing substantial Victorian structure to beneficial use. Whilst some new build is required, this is a lower embedded carbon option than an entirely new build that delivers the same facilities. Furthermore, the designs incorporate solar panels and will include electric vehicle charging points. Sustainable urban drainage is being incorporated into the design.

Alignment and support for existing investments

Where applicable explain how the bid complements or aligns to and supports existing and/or planned investments in the same locality

The proposal for this facility was one of a package of measures that formed the combined Sutton-in-Ashfield and Kirkby-in-Ashfield Towns Fund proposal. The Towns Fund allocation for this project covers 35.4% of the cost and this Levelling Up Round 2 investment will add to that to provide more of the total project costs. This will leverage private sector funding to generate the total project budget.

This bid compliments the Towns Fund programme Advanced Distribution and Manufacturing Centre, Construction/Engineering Centres, Library Innovation Centres and the Visitor Digital project.

Confirm which Levelling Up White Paper Missions your project contributes to

Select Levelling Up White Paper Missions (p.120-21)

Living Standards
Education
Skills
Pride in Place

Write a short sentence to demonstrate how your bid contributes to the Mission(s)

Living Standards: The SDC/planetarium will excite people about STEM careers, leading to higher level qualifications and therefore greater earning potential, increasing their individual living standards, contributing to the

productivity and prosperity of the area.

Education: The development will be use astronomy and related subjects, particularly through a programme of school and childrens' uniform group visits, to excite and inspire young people to greater educational achievement.

Skills: By exciting people about the possibilities of STEM careers, they will be encouraged to seek high quality skills training, including at facilities such as the flagship Towns Fund supported Advanced Distribution and Manufacturing Centre and Construction/Engineering Centres. Volunteering at the new Centre will enhance the skills of those involved, making them more attractive to potential employers.

Pride in Place: By creating a unique landmark visitor attraction that is supported by members of the local community, pride in place will be increased.

Provide up to date evidence to demonstrate the scale and significance of local problems and issues

As the UK Prosperity Index 2021 shows (1), Ashfield currently performs poorly in education, relative to other local authority areas, and, ranked 310th, lies within the bottom quartile of all local authority areas nationally. It ranks even lower, at 371st of the 379 local authority areas, for the proportion of its population holding level 4 qualifications or above (2).

Likewise, Nomis figures show fewer Ashfield residents possessing a level 3 qualification or above (50.2%) compared to an East Midlands average of 58.2%, while 8.4% of Ashfield residents possess no formal qualifications, which is again higher than the figure for the East Midlands as a whole (6.2%). Looking at skills considered important for the future jobs market, a higher proportion of Ashfield's residents possess no foundation digital skills than the regional average (9%) (3). Furthermore, Mansfield and Ashfield rank 8th and 10th lowest respectively in terms of social mobility out of 324 districts (4). In terms of Multiple Index of Deprivation, the Ashfield District was ranked 63 out of 317 local authorities (where 1 is the most deprived) in 2019, down from 69 in 2015. That is, the trend is going in the wrong direction (5)

In contrast, the East Midlands relies more on manufacturing for employment than any other region (6), yet it is predicted that Mansfield and the surrounding area will lose almost a third of its workforce to automation by 2030 (7).

It is clear from these data that there is a current mismatch between educational attainment and current/future needs. Research shows that poor educational opportunities to engage in real science leads to long term educational as well as economic disadvantage, hindering local young people's development and futures. Furthermore, research undertaken on behalf of the British Association of Planetaria (BAP) shows that those living in areas with high index of deprivation are under-represented in the visitor statistics for planetariums. The Centre's location - in one of the most deprived districts in the country - will help redress this.

With regard to tourism and the visitor economy, the Ashfield area lacks significant visitor attractions to draw people into the area. There are no other visitor attractions in the area that replicate what the new centre will achieve both in terms of education and the visitor economy. However, it has been demonstrated that science centres and planetariums can draw a lot of visitors (e.g. 8), increasing visitor spend in the area.

References are provided in the next question.

Demonstrate the quality assurance of data analysis and evidence for explaining the scale and significance of local problems and issues

The references listed below were used to provide the evidence in the response to the previous question. All of these are reputable and accepted third-party sources and independently commissioned reports

1) UK Prosperity Index 2021; Legatum Institute
2) NOMIS 2020
3) Citizen Online Digital Inclusion report for Ashfield - May 2020
4) Social Mobility Commission, State of the Nation, 2017
5) Index of Deprivation 2019 and 2015, http://dclgapps.communities.gov.uk/imd/iod_index.html#
6) UK Manufacturing, The Facts, 2020/21 Make UK Santander
7) Cities Outlook 2018, Centre for Cities
8) Association of Leading Visitor Attractions, 2020

Demonstrate that the data and evidence supplied is appropriate to the area of influence of the interventions

The data supplied for educational attainment, social mobility and multiple index of deprivation is specific to the local authority area where the intervention is planned. It is therefore considered to be of sufficient granularity to inform justification of the intervention. The data source used for manufacturing output is at a granularity that covers the whole of the East Midlands but given the anticipated catchment area for visitors to the new centre, this is considered appropriate. By necessity data from outside of the geographic area has had to be used to demonstrate the draw of science discovery centres and planetariums due to the lack of such facilities in the area. The need to draw on a wider geographic data set to demonstrate this in itself is partial justification for the intervention.

Provide analysis and evidence to demonstrate how the proposal will address existing or anticipated future problems

The proposal will address two issues: a need to increase visitor economy footfall in the area and the mismatch between current educational outcomes and the need for a STEM enabled work force.

With regard to the visitor economy, it is anticipated that the footfall at the new centre will rise from visits to the existing observatory of <3,000 per annum to 21,340 per annum (steady state in 2027) for the new facilities. Visitor number estimates are derived from public surveys, experience of operating the current observatory, a consultation with local schools and a review of comparator organisations. A forecasting model was developed based on annual visit numbers in a range of different categories using reasonable estimates of the number of each type of event. The key event types that account for most of the footfall and revenue generation are: planetarium shows modelled at 50 visitors per show and 145 shows per year; Special events in the planetarium at 24 shows per year and 55 visitors per show; 128 school visits per year at 30 pupils per visit; 100 uniformed group visits per year at 30 people per visit; 40 adult group visits per year at 35 people per visit; 12 open events per year at 200 per event; and 8 night school courses per year at 35 people per course. Other smaller visit types such as private hires make up the balance of the visitor numbers. Price points were calculated based on local willingness to pay survey data and a review of comparator organisations. The price points and visitor numbers are provided in Tables 6.8 and 6.9 (page 83 and 84) of the attached Business Case.

The impacts are quantified in Section 4.3 (pages 35-47) of the attached Business Case and summarised below. The methodology is also described in responses to other questions in this application:

The expected annual visitor numbers were used to calculate the impact on the local visitor economy. To maintain conservative assumptions, only adult visits were counted as contributing to the local economy. The visitor economy impact

of business as usual was then subtracted to generate a net financial value per annum from 2027 of £402.2k, with lower returns in the previous two years as visitor numbers build.

The new facility will employ staff and generate indirect and induced employment benefits. The per annum economic value of these was calculated using a methodology that considers deadweight, leakage, displacement, and a multiplier effect. The annual employment benefit is estimated to be £89.6k from 2027.

Local impact on goods and services resulting from the increased MSAS spend in the area due to their greater annual revenue was calculated using a similar methodology and found to be £155.6k net (i.e. after subtraction of business as usual).

All of the above values were then used in the benefits lines in BCR calculation in the attached ‘Costings and Planning’ workbook provided.

A subset of visits account for the expected STEM educational benefits. These are much more difficult to quantify as the new centre will be at the start of the education chain, with a vision to inspire future education and work choices. We have therefore not included them in the BCR calculation as there are no reliable numerical estimates on the people who make a choice to follow a STEM educational pathway due to a visit to such a centre for learning. However, there is significant qualitative research evidence that science discovery centres and planetariums do have a positive effect. Whilst the total number of people influenced is uncertain, there is available data on the individual impact. For example, the marginal lifetime benefit of two or more A-levels compared with no qualification is £441,000 per person (1).

In order to calculate the order of magnitude financial impact, the Loop Social Value platform was run using the education visit numbers once open (see Table 4.14, page 47 of the Business Case). Note that this significantly under-estimates the financial impact of higher educational attainment, so to some extent already allows for the fact that not every visit will change an educational outcome. Nevertheless, taking only 10% of the value calculated by the Loop platform gives a net present educational value of over £5.7 million. However, caution is advised in using these data.

1) The Economic Value of Key Intermediate Qualifications: Estimating the returns and lifetime productivity gains to GCSEs, A levels and Apprenticeships, Research report, December 2014

Describe the robustness of the analysis and evidence supplied such as the forecasting assumptions, methodology and model outputs

The evidence of need in local education comes from sources including (1-5).

The impact of increased income as a result of higher grades in education comes from the ONS and (6,7). The Loop Social Value platform is based on Green Book principles and is available at (8)

The impact of science discovery centres and planetariums on educational outcomes comes from (9-13) and impact on tourism from (14-16).

Evidence of local interest in visiting the new centre comes from MSAS surveys (Section 5.2.3 (pages 57-61) of the Business Case). Also, an exhibition by MSAS at Mansfield Museum in summer 2019 attracted over 12,800 visitors.

Data used to quantify the economic impact of visitors to the area comes from the Association of Independent Museums (17) and the Scarborough Tourism Economic Activity Model (18), as does the employment impact.

The spreadsheet model used to generate the operational income and expenditure profiles were built in house by a MSAS volunteer with degrees and a PhD in scientific disciplines with high components of numerical analysis. The models were reviewed by the MSAS Treasurer and challenged by the MSAS

Trustees.

Staff/visitor ratios in the model are close to those of other organisations and visit types comparable. The closest comparator organisation in terms of size and operating model is South Downs Planetarium. We have reviewed their annual report and accounts. With similar visitor numbers and operating costs, they have been financially sustainable for over 19 years. A more detailed discussion of comparator organisations is given in Section 5.2.1 (pages 55-56) of the Business Case.

The cost estimates that informed this bid come from the cost plan generated by the appointed main contractor at RIBA Stage 3, uplifted for inflation, and these were reviewed by the independent client-side QS.

The Business Case was reviewed by independent assurance consultants (Towns Fund process) and the Council's s151 officer.

References

1) Engineering UK 2020 Educational Pathways into Engineering
2) Commission on Inequality in Education 2017
3) Ashfield's 10-year Education and Skills Plan (2022-2031)
4) Nomis 2020
5) Social Mobility Commission State of the Nation 2017
6) GCSE Attainment and Lifetime Earnings - June 2021, Department for Education
7) The Economic Value of Key Intermediate Qualifications: Estimating the returns and lifetime productivity gains to GCSEs, A levels and Apprenticeships, Research report, December 2014, Department for Education
8) Loop, 'the social value people', available at https://loop.org.uk
9) European Journal of Education Studies (Vol 5, No 2, 2018).
10) Frontier Economics (2009)
11) The Investigation of the Effect of Visiting Science Centre on Scientific Process Skills. Procedia - Social and Behavioral Sciences 197 (2015) 1312–1316.
12) International science centre impact study (2014)
13) The role of science identity in science centre visits and effects. Science Education Volume 103, Issue 6. (2019)
14) Association of Leading Visitor Attractions (2020)
15) National Science & Engineering in the UK
16) The Science and Industry Museum.
17) Economic Value of the Independent Museum Sector Toolkit 2019; Association of Independent Museums
18) STEAM report Highlights – Marketing Nottingham 2022

Explain how the economic costs of the bid have been calculated, including the whole life costs

The investment is for a capital project that will result in the facilities described in the bid. The design team and related services (including contractor overheads, profit and management fees) have been selected and appointed via competitive tender, so their prices are known. Following initial investment from the Towns Fund and other sources, the designs for the investment are currently nearing the end of RIBA Stage 3 (detailed design). The designs by the architect have had input from the specialist planetarium, structural and civil engineering consultants in collaboration with the main contractor to ensure buildability. The costs have been assessed by the main contractor in April 2022 using knowledge of their supply chain costs. A further percentage was added to cover inflation between the date of the cost plan and the mid-point of the construction project in accordance with best practice. Contingencies appropriate to the level of uncertainty at this stage of design have also been included (see response to other questions for the values). Cost risks and uncertainties have been addressed both through the inflation allowance, which is based on industry wide data/analysis, and the contingency. Engineering studies and site investigations have been used to de-risk the major items. Where there is still uncertainty over specific aspects, a conservative approach has been taken to assessing cost line items. A discounting rate of 3.5% has

been applied to the benefits calculations.

Optimism bias has been explicitly included in this Business Case in the following ways:

i) A 10% contingency (in addition to a construction industry sector inflation estimate of 6.9%) has been included in the construction costs. This is considered reasonable as we are approaching the end of RIBA 3 design and a number of construction risks have been addressed through the engineering and design studies.
ii) A value engineering exercise that is currently underway could bring further savings. As this is work in progress, the potential additional saving has not been included in this assessment.
iii) The financial sustainability assessment in the operational business plan includes a 5% operational overheads contingency. With this included, the plan still shows a year-on-year positive balance sheet.
iv) The sensitivity analysis in this Economic Case chapter includes a further 10% increase in the project costs, a 10% reduction in visitor numbers and a reduction in the multiplier from 1.25 to 0.9 yet still shows a BCR of >2.
v) The education benefits have not been included in the BCR calculation.
vi) Following comments from the assurance consultants, more time has been added to the delivery programme to allow for slippage.

Whilst revenue costs are excluded from this bid, our operating model shows that these will be fully funded from entrance prices and other income such as membership schemes and merchandise sales. As a charity, MSAS will recycle all income into operating and maintaining the facilities.

Describe how the economic benefits have been estimated

For the data tables that support this response, please refer to Section 4.3 (pages 37-45) in the attached Business Case. All benefits were calculated to NPV using the Costs and Planning workbook supplied by DLUHC with this application form (attached).

Visitor economy benefits: An analysis of the visit numbers and types for the current observatory was undertaken in order to provide data for the ‘do-nothing’ baseline option. Visitor survey data were used to categorise the visits into ‘local’, ‘day tripper’ and ‘overnight stay’. These data are shown in tables 4.4 and 4.5 of the Business Case (pages 36 and 37). Following the guidance in the Association of Independent Museums (AIM) Economic Impact Toolkit (1) we calculated the annual tourism spend impact of the observatory in its current state. This is shown in Table 4.6 (page 37).

For the new development, the same calculation was undertaken for the greater number of visitors. As the new Centre will be a regionally (if not nationally) significant draw, the percentage of local visitors was reduced, but in order to maintain conservative assumptions, anyone living in the Nottinghamshire area was classified as a local visitor. Only projected adult visitors were included in the calculations as a further conservative assumption. The added value of the intervention used in the provided Costs and Planning workbook was then calculated based on difference between the do nothing and the preferred options.

Employment Impact: At present the Observatory employs no staff and is run by volunteers. Once the new facilities are operational two FTEs will be required. The project will also generate some temporary construction jobs and have a wider employment impact over the local area.

In considering the economic impact of new job creation, it is important to identify the location of residence of those taking up the new positions. The nature of the roles and the local labour market suggest that it is likely that those recruited into the new posts will come from the local area. We have therefore estimated that 85% of these posts will be filled by local residents, given an adjusted total of 1.7 FTE. Based on average turnover per job in the museum sector, this gives a direct employment related economic impact of £60,901 per annum.

We also need to consider the net value of the additional indirect and induced jobs that will be created as a result of the project. In doing this it is necessary to consider leakage, deadweight, displacement, and a multiplier effect. The definitions of each of these are given on pages 40-41 of the Business Case. This adds an additional £28,659 per annum

The construction contract is expected to temporarily employ 19.6 FTE (2). It is accepted that 10 years of temporary employment in the construction sector equates to one FTE. Therefore, this project will create an additional 1.96 permanent FTE. Based on the track record of our chosen construction partner, 95% of these will be local. Applying a leakage of 5% brings this down to 1.86 FTE. To remain conservative, we have not included the construction FTEs in our BCR.

Spend on Goods and Services: Consideration also needs to be given to the impact of the organisation's spend on goods and services in the local and regional economy. For the purpose of this exercise, we have assumed that the standard leakage rate of 37.5% for small museums and heritage attractions applies for the base case but we reduce this to 30% for the preferred case as it is categorised as a medium attraction (1). As for the employment impact, deadweight, displacement and a multiplier were also applied, and the do-nothing/ business as usual case used as a baseline.

Education Benefits:
Whilst a key benefit of the new centre will be to inspire people to follow STEM career paths, we recognise the difficulty in assigning a monetary value to this. The discounted results are shown in Table 4.14 (page 47) of the Business Case. Whilst we have estimated an NPV of £57.6 million for this, we have not included it in the BCR calculation. As our intervention is at the very start of the education chain, we have divided the output from the social value calculator that we used for this assessment by an arbitrary factor of 10 to arrive at an estimated benefit of £5.76 million.

References

1) Economic Value of the Independent Museum Sector Toolkit 2019
2) Annual Business Survey June 21: ONS

Provide a summary of the overall Value for Money of the proposal

The monetised benefits for this project come from visitor spend, employment impact and spend on goods and services by the new Centre. Each of these have been calculated separately in the attached Costings and Planning Workbook and are described in more detail below and in Sections 4.3 and 4.4 (pages 35-51) of our Business Case. All benefits are calculated net of business as usual.

Visitor Spend: As the only Planetarium in the region, it would be expected to draw in visitors from a wide area. The visitor number projections demonstrate that the Planetarium will be highly popular and will see annual visitor numbers at the site rising from 2,723 currently to 21,340 by 2027/28. We estimate that 66% of visitors will be adults and have only used their economic activity in our estimates. With no alternative figures at local authority level available, we have used the local and day visitor spend figures from the Scarborough Tourism Economic Activity Model (STEAM) for Nottinghamshire (2019) to give a more accurate picture of economic impact. Remaining conservative with our estimates however, we have used the lower Association of Independent Museums (AIM) overnight visitor spend value (£58.54 and converted to 2022 values using the ONS deflator) rather than the STEAM figure of £194.02 per visitor. From opening in 2024/25, we assume a steady ramp up to 2027/28 visits. From 2027/28 onwards, we assume that visitor numbers remain constant.

Employment Impact: The Observatory currently employs no staff but will employ 2 FTE once the new centre is opened. In considering the economic impact of new job creation, it is important to identify the location of residence of

	those taking up the new positions. The nature of the roles we have therefore estimated that 85% of these posts will be filled by local residents, resulting in a local FTE equivalent of 1.7. We also consider the net value of the additional indirect and induced jobs. To do this we consider leakage (15%), deadweight (25%), displacement (37.5%) and a multiplier effect (1.25, as recommended in the AIM guidance). This results in an additional 0.8 FTE. Whilst we estimate that construction activity will create an additional 1.86 long -term FTE, we have not included this in our calculations. Goods and Services: This is economic activity in the local economy from the observatory spending its revenues on local goods and services. Again, we apply leakage (15%), deadweight (25%), displacement (37.5%) and a multiplier effect (1.25) to estimate the annual spend impact. The guidance with this application recommends that a 60 year benefits time is used for new build and 30 years for refurbishment. As the benefits in this intervention arise from an approximate 50:50 mix of new build and refurbishment, we have used a 45 year benefits time. However, we also report the BCR using 30 years for comparison. With the above approach, under the core costs and benefits scenario, the BCR from the Costs and Planning Workbook is 2.61 (45 years) or 2.09 (30 years).
Upload explanatory note (optional)	

Have you estimated a Benefit Cost Ratio (BCR)?

Yes

Estimated Benefit Cost Ratios

Initial BCR	2.61
Adjusted BCR	

Describe the non-monetised impacts the bid will have and provide a summary of how these have been assessed

Education, in particular the promotion of STEM subjects, is a clear focus of the project and it will raise awareness of the substantial opportunities that careers in STEM related occupations can unlock through curriculum enrichment, classroom activities and courses. Whilst it is possible to monetise education benefits, exact quantification is challenging so, to avoid optimism bias, we have adopted a conservative approach of not including these benefits in the formal BCR calculations, but instead provide the following evidence in support of the VfM assessment:

Research has proved the link between improvement in grades and qualification levels on lifetime earnings. A 2021 study identified that a one-grade improvement in overall GCSE attainment is associated with an average increase in the present value of lifetime earnings of £8,500, while a one-grade improvement in maths is associated with a discounted return of £14,500 (1).

Similarly, achieving a Level 3 apprenticeship secures a 16% earnings premium, whilst gaining a classroom-based level 3 qualification in a vocational subject results in a 6% premium. In each case, the employment probability premium (the estimated additional likelihood of gaining employment) also increased. Compared to people with no qualifications at all, the marginal lifetime productivity returns to two or more A levels are substantially higher at

around £441,000 for men and £354,000 for women (2).

Likewise, it is recognised that having participated in some form of work experience activity prior to leaving school or college improves a young person's chances of securing employment. From the construction phase onwards, we will provide numerous opportunities for work experience placements for schoolchildren up to graduates. We intend to support work experience placements in the construction activities, in the café and in customer service and administration roles as well as supporting local university students with projects linked to their studies. As a result, these activities will undoubtedly stimulate economic benefits.

To provide an estimate of Net Present Social Value (NPSV) for these activities we have run our estimated work experience and educational visitor numbers (i.e., excluding visitors that we categorise as 'visitor economy') through the Loop Social Value Platform (loop.org.uk), which is based on Green Book principles. The headline NPSV over a 30-year period is £57.6 million. However, it is recognised that the organisation is only one of several partners contributing to an individual's educational attainment and lifetime earnings. For example, our project hopes to generate a pipeline of learners for formal skills training centres being supported by the Towns Fund programme. Therefore, it is almost impossible to apportion the exact proportion of benefits attributable to this project alone.

However, if the intervention delivers just 10% of the educational benefits estimated through the Loop SVP, it will generate a NPSV of £5.76 million (this is perhaps very conservative as Loop Platform inherently uses the scale of our intervention as input data).

1) GCSE Attainment and Lifetime Earnings - June 2021; Louis Hodge, Allan Little and Matthew Weldon: Department for Education
2) The Economic Value of Key Intermediate Qualifications: Research report, December 2014

Provide an assessment of the risks and uncertainties that could affect the overall Value for Money of the bid

In order to consider the effects of risks and uncertainties on the VfM assessment, we have modelled four scenarios: an increase in project delivery costs of 10% (in addition to the existing inflation and contingency allowances); a 10% reduction in visitor numbers; a 10% reduction in spend on goods and services; and a reduction in the AIM multiplier from 1.25 to 0.9. The detailed results are shown in Section 4.6, Tables 4.17 and 4.18 (pages 50-51) of the attached Business Case. The public sector contribution is based on the sum of the Towns Fund (£2.25m) and Levelling Up Round 2 (£3m) contributions plus an £11k contribution to design costs from ADC.

Taken individually, the largest impact is the reduction in visitor numbers, which reduces the BCR from 2.61 to 2.44. Under a worst-case scenario where all four risks materialise, the BCR becomes 2.16.

Whilst we consider that, based on the guidance issued with this call for proposals, a 45 year benefits time is appropriate, we have also calculated the BCR using a more conservative 30 year period. This reduces the core position BCR to 2.09

Upload an Appraisal Summary Table to enable a full range of impacts to be considered

Appraisal Summary Table 1

Upload appraisal summary table	Science Discovery Centre and Planetarium appraisal-summary-table.xlsx

Additional evidence for economic case

Additional evidence 1	
Upload additional evidence	V3 45 year Science Discovery Centre single project costings and planning workbook_v2.00.xlsx

Confirm the total value of your bid

Total value of bid	£6350000

Confirm the value of the capital grant you are requesting from LUF

Value of capital grant	£3100000

Confirm the value of match funding secured

	£2279000
Evidence of match funding (optional)	

Where match funding is still to be secured please set out details below

A contribution of £2.25 million has been allocated to this project from Ashfield Towns Fund Investment Programme and is included in the secured matched funding figure provided. This is subject to sign off of our Green Book Business Case, which has received favourable feedback from the assurance consultants. £29,000 has been raised from a combination of donations from businesses, private individuals, and a local further education provider, plus a grant from Ashfield District Council to support early project costs. Some local businesses have committed to providing goods and services, rather than direct financial contributions.

Assuming that this bid is successful, not allowing for in-kind contributions, we will have a funding gap of ~ £1 million (16% of the total project cost), including contingencies and an inflation allowance.

This will be filled through contributions from private sector grant bodies, businesses, private high net worth benefactors, and individual small donations. A funding strategy is in place and some applications are in preparation, but some funds require that either 50% of the capital is raised first (the Towns Fund contribution is 35.4%) or that planning permission has been granted. Those applications will be triggered once the criteria have been met. Initial discussions with high-net-worth benefactors have been positive.

A detailed description of the funding strategy has been provided elsewhere in this application. Given the across-the-board level of interest shown in this project, we are confident that, with a contribution from the Levelling Up Round 2 fund, we can leverage the remaining capital.

Land contribution

If you are intending to make a land contribution (via the use of existing owned land), provide further details below	The new development is on land owned by the MSAS charity, who will also own and operate the new facilities. MSAS owns and operates the existing adjacent Sherwood Observatory. Attached is a letter from an independent valuer that shows the value of the combined land area of £85,000. We estimate that this value is split approximately 50:50 between the two parcels. There are no known restrictions on the use of the land that would prevent the development proceeding and none were highlighted by the Council's planning team at the pre-application advice stage. A full planning application will be submitted in Autumn 2022. MSAS also lease a car park from the adjacent Coxmoor Golf Club that will be used as overflow for the new development and discussions are ongoing regarding long term access.
Upload letter from an independent valuer	Observatory valuation report.pdf

Confirm if your budget includes unrecoverable VAT costs and describe what these are, providing further details below

All of the project costs include VAT. At present, the total project budget assumes VAT at the full prevailing rate of 20%. This is a conservative assumption as some items (e.g. green energy and some disability access) may well attract a lower rate of VAT, depending on tax law at the time of procurement. However, these will be a small part of the overall VAT cost and the cost plan is not sufficiently detailed to show this as a saving with confidence at present. As MSAS is a charity, we have taken legal advice on the VAT status of the project to consider whether any charitable exemptions will apply. Exemptions are available for some charitable construction projects for e.g. village halls. Unfortunately, the advice is that the nature of the development and operating model means that the project does not qualify for the exemptions.

Describe what benchmarking or research activity you have undertaken to help you determine the costs you have proposed in your budget

Given the challenges associated with reusing a structure that is nearly 140 years old, after a review of options, it was concluded that a contractor led design and build form of contract would be most appropriate as this would secure the early contractor involvement that was felt to be essential to ensuring that ‘buildability’ and ‘affordability’ (that is, cost effective solutions) were factored into the designs from the outset. This approach also ensures a clearer means of apportioning responsibility and liability as the design team are directly appointed by the main contractor, rather than the alternative approach whereby the design consultants are appointed by MSAS, giving a single point of contact in the event of a dispute. Furthermore, a decision was made to select the contractor, through competitive tender, from those that had already prequalified under an existing SCAPE framework agreement to take advantage of their full procurement and assessment processes.

The main contractor was appointed in June 2021 and then proceeded to run a competitive tender exercise to select a core design team consisting of an architect, structural & civil engineer, and specialist planetarium provider. The design team costs have therefore all been fixed through to the end of the project. As part of the selection process, the specialist planetarium provider was asked to tender for their element of the construction phase capital costs. Whilst this was done to aid selection of the design team in April 2022 they confirmed that their costs still apply. Our contract with them retains the right to re-tender this element of the work should their estimated costs significantly change.

Project Management and Consultancy support for the MSAS project manager has also already been tendered and the costs fixed through to the end of the

project. The MSAS project manager was previously Head of Construction at British Gas Property and is donating his time on a pro bono basis, as are the members of the Project Board and the MSAS Trustees. Legal advice is provided by Browne Jacobson LLP on a pro bono basis.

Detailed design commenced in November 2021 and is approaching the end of RIBA Stage 3. As part of this, a site investigation has been undertaken to assess geotechnical conditions (for foundations and drainage) and to identify any contaminated land issues. No matters of significant concern were identified, so this aspect is considered to have been de-risked. The contractor market tested the construction costs in July 2022, based on the current designs, to produce a cost plan, which is kept under review. The cost plan also includes an allowance for inflation between now and the mid-point of the construction phase according to industry best practice. A further contingency of 10% has also been applied, which is considered reasonable given the current stage of design and activities already undertaken to de-risk the project.

With regard to operating costs and revenue once the facilities are open, a detailed spreadsheet model has been generated using as far as possible known rates for cost items. This also includes a 5% spend contingency. The operating revenue stream model uses input data from comparator organisations combined with a public consultation exercise and schools consultation that included questions about price point (willingness to pay). The model has been stress tested using a 10% reduction in income. This showed that the facilities remain financially sustainable. Furthermore, the business plan shows a £25,000 per year (i.e. >10% of revenue) contribution to future upgrade costs at year 10. This could be deferred in any given year to help to balance income and operating costs if needed.

Provide information on margins and contingencies that have been allowed for and the rationale behind them

The current construction market is experiencing high inflation, shortage of materials and a shortage of skilled personnel. These factors are putting a significant strain on live construction projects and making forecasting costs for new schemes very challenging. We have used the BCIS All-In Tender Price Index as a guide for calculating inflation on the project as well as reviewing our cost consultants internal market data and information received from contractors about what they are seeing from their supply chains to arrive at an inflation allowance of £395k. This inflation figure is based up to mid-point of construction against the current programme and is included in the overall project estimate in this application. Contractors are finding it difficult to get their supply chain to hold their prices for long and this also impacts on the inflationary risks for the scheme. We will continue to monitor this during the preconstruction period. Note that inflation to July 2022 is already embedded in rates and unit costs in the contractor's initial cost plan.

In relation to project contingency, 10% (£535k) has also been included for costs that are not yet fixed. There are also some potential savings included in the current contractor costs for progressing with the design and build contract that are being assessed through a value engineering exercise.

There is a balance to take, especially in the current construction climate, and the level of contingency should be based on the risk profile for the project. The current stage of design and the early involvement from the contractor has helped to reduce the risk profile on the scheme accordingly. Taking all factors into account we consider the inflation and contingency allowances to be appropriate for this stage of the project.

Describe the main financial risks and how they will be mitigated

As identified in the earlier responses, the core project budget includes a 10% contingency that can be allocated to any specific items that result in cost overruns. As this is already in the budget, it will be allocated on a pro rata

basis in line with the percentage contribution that each funder makes to the project. If a potential for the out turn cost to exceed the total current budget (including inflation and contingencies) is identified, then it will be possible to apply for further grants from other private sector funders to cover any shortfall. Note that the current gap funding strategy includes a list of potential private sector contributions that, together with the proposed public sector contribution, sum to more than the total project cost as we assume that not all applications will be successful. As a number of these applications will be made in parallel, it is possible that total awarded grants may exceed the current project budget, giving us some additional flexibility. Clearly, this is subject to the outcome of each specific application. Furthermore, the cost plan will continue to be refined as we proceed through RIBA Stage 4, giving us further confidence in the estimated total project cost.

The specific financial risks identified in the risk register will be managed as follows (the full risk register is given in Appendix 7.2 (page 116) of the Business Case and the June 2022 risk register is attached to this application (note that not all risks are financial):

I. Project costs increase above agreed parameters (during design): The cost plan is kept under review so that any adverse changes are identified early. A value engineering exercise is currently underway, and the design team have reported that it may be possible to further reduce the construction costs. This has not been taken as a revision to the total project cost as yet as it continues to be subject to further review and challenge. However, in effect, this may give us a further contingency/head room in the budget.

II. In project (i.e. during construction) capital costs increase: The early contractor involvement approach to the design is specifically procured to minimise the risk of unforeseen events during construction. This has included specialist input during design such as a site investigation and ecological survey. Further value engineering will be undertaken during construction to mitigate any unforeseen cost increases that are not already included in the inflation allowance and contingency.

III. Matched funding applications do not achieve project budget: The contractor will only be instructed to start the construction phase once we have commitments from funders that match the project costs. This approach reduces the risk that capital costs will be sunk without delivering an operational facility. Also, the design team have been instructed to produce a design that can be delivered in phases. This would allow the planetarium to be opened without the reservoir being completely refurbished, reducing the project costs. The reservoir would then be refurbished as a second phase when available funds allowed. This option would only be taken (and in agreement with the funders) if major difficulties were encountered in raising the total project budget as it is a less cost-effective solution than building in one phase (building in phases adds ca. £150k to the total project cost due to the need to demobilise then remobilise).

We do not consider that the project will result in any significant disruption or displacement of any communities, cultural groups and local transport groups, so we do not consider that there are any mitigation or compensation events that will need to be included in the cost plan over and above the usual considerations in any design such as boundary treatments and ecological management.

Upload risk register	July 2022 Risk Register.xlsx

If you are intending to award a share of your LUF grant to a partner via a contract or sub-grant, please advise below

The full LUF grant would be awarded to the MSAS Charitable Incorporated Organisation as described elsewhere in this application. MSAS would continue to develop and deliver the project. Contracts with the design and construction supply chain will be let by the charity. Their address is

FAO Dr Steve Wallace

Sherwood Observatory
Coxmoor Road
Sutton in Ashfield
Nottinghamshire
NG17 5LF

MSAS will be responsible for day to day project management and delivery. The grant will be paid by the Council in tranches following signature of a grant funding agreement, based on the agreements being put in place to distribute the Towns Fund.

The governance and controls on disbursement of the grant are described in our responses to the next question. The governance and controls put in place by MSAS for payment of their supply chain are also provided elsewhere in this application and in the Business Case.

What legal / governance structure do you intend to put in place with any bid partners who have a financial interest in the project?

The governance procedures will follow the Local Assurance Framework (LAF) that has been put in place to manage the Kirkby and Sutton Towns Fund programme and which has been adapted for Levelling Up Round 2. This is provided in the 'LUF Assurance 2022' attachment and is summarised below.

The Towns Fund LAF sets out the structure and roles that the Council and Discover Ashfield, the Towns Fund Board will undertake and the processes and policies that will apply to the decision making and oversight that are required. The adapted LUF framework is jointly owned by the Discover Ashfield Board and Ashfield District Council. The Towns Fund LAF was approved by both organisations in October 2021 and is subject to an annual review. If the LUF bid is successful the LUF Assurance 2022 document will be formally adopted by the Council and Discover Ashfield

Discover Ashfield was set up in 2017 and includes representation from a wide range of business, community and public sector bodies, including academies, further education and Mansfield and Ashfield 2020. Community representation is from Citizen's Advice Ashfield and Ashfield Voluntary Action. Ashfield District Council, Nottinghamshire County Council and the Local Enterprise Partnership – D2N2 also sit on the Board.
The Accountable Body is Ashfield District Council which has responsibility for ensuring the LAF is in place, meets the standards set out by Government and that all funding decisions are made in accordance with it. The Section 151 officer at Ashfield District Council ultimately provides assurance of proper use of Government Funds and Governance Procedures.

The LAF defines the roles and responsibilities of the Accountable body and of Discover Ashfield.

The grant agreement between the Council and MSAS will confirm that MSAS:
• Bears the risk for all overspend on the project beyond the approved amount
• Will be required to participate in a full and timely manner with any audit activity that is undertaken as part of the overall programme assurance
• Will be required to participate in a full and timely manner with any external reviews undertaken by government (or commissioned by government) as part of its assurance and/or evaluation of the programme
• Will maintain regular and timely reporting as set out in the monitoring and evaluation requirements.

Where changes are deemed to be required, it is the responsibility of the Council to maintain overall change control and ensure any changes are recorded including the requisite level of approval obtained. Payment milestones will be agreed with MSAS at the point of contract. The milestones will depend on the complexity, cost, and timescales of the project.

Summarise your commercial structure, risk allocation and procurement strategy which sets out the rationale for the strategy selected and other options considered and discounted

This project is a capital build that combines a state-of-the-art planetarium with reuse of an underground Victorian reservoir. These criteria have informed the procurement route.

The current status of the project is that the design team was appointed in November 2021 and are nearing the end of RIBA Stage 3 (detailed design). This phase has been funded by an early release Towns Fund grant which was approved at the Discover Ashfield Board Meeting on 19th November 2021, plus a 7.5% contribution from MSAS fund raising activities. The DA board paper included a description of the planned procurement approach. This section therefore describes and justifies the procurement process that is already partially completed. Although the design team includes the chosen main contractor, most of the capital costs associated with the construction phase will be let later in the project by competitive tender as sub-contracts appointed to the main contractor.

Development of the Science Discovery Centre and Planetarium involves the refurbishment and repurposing an underground Victorian reservoir, originally opened in 1886 to supply water to the local communities and businesses. New build will also be required to provide visitor facilities such as a café, plant & equipment rooms, and toilets. A planetarium will be built on top of the reservoir. Design and fit out of the planetarium are specialist activities and therefore form a critical part of the procurement strategy. Given the challenges associated with reusing a structure that is nearly 140 years old, after a review of options, it was concluded that a contractor led design and build form of contract would be most appropriate as this would secure the early contractor involvement that was felt to be essential to ensuring that ‘buildability’ and ‘affordability’ (that is, cost effective solutions) were factored into the designs from the outset. This approach also ensures a clearer means of apportioning responsibility and liability as the design team are directly appointed by the main contractor, rather than the alternative approach whereby the design consultants are appointed by MSAS, giving a single point of contact in the event of a dispute.

Whilst MSAS have secured the services of Browne Jacobson LLP on a pro bono basis to provide construction contract legal advice, if was felt that setting up the necessary contracts, tender documents and subsequent contract terms negotiations from scratch (even assuming use of one of the standard forms of construction contract as a starting point) would represent a disproportionate time and cost burden on the project, so a decision was taken to select the main contractor via the SCAPE Beyond the Public Sector (Venture) framework route (Scape Venture). This approach also gives ‘leverage’ in the event of poor performance by the main contractor as they stand to lose more than from a dispute with a single client who is unlikely to procure anything on this scale again.

All Scape Venture partners are selected following a rigorous procurement exercise. Those partners were initially successful on SCAPE For the Public Sector (Procure) where they went through a full procurement process inclusive of invitation to tender and prequalification questionnaires and full evaluation of cost and quality by a team of evaluators. These partners were then invited to join Scape Venture and enter into a secondary procurement process where they all had to demonstrate their ability to work with non-public sector bodies. The partners then signed a separate Framework Agreement, which has embedded schedules, KPIs and terms and conditions similar to that of SCAPE For the Public Sector.

Through using Scape Venture, MSAS could capitalise on avoiding the time and cost of procurement, as SCAPE had already initially procured their partners in line with Official Journal of the European Union (OJEU). This gave immediate access to industry leading delivery partners, utilising early contractor engagement. In addition, this procurement route brought access to the team at SCAPE to provide support pre-, during and post-project.

The SCAPE approach also includes social value, which was considered to be important given the vision for this project. SCAPE is recognised nationally as leaders in social value, recently winning the Framework Award at the 2021 National Social Value Awards. Through a consistent and industry-recognised

performance management approach, setting appropriate strategic objectives and embedding relevant measures of performance, SCAPE ensures that all delivery partners in their supply chains and partnerships prioritise social value outcomes as an essential element.
Requests for proposals were issued to the prequalified contractors on 19th April 2021 and interviews were held on 12th May 2021. A tender assessment panel was assembled consisting of members of the project board and a MSAS Trustee with construction experience. Each member of the team independently assessed the proposals against the balanced scorecard weighted to 20% sustainability, 10% heritage experience, 40% quality criteria, and 30% cost.

Following a recommendation to the MSAS Board of Trustees, the selected main contractor was formally appointed using the SCAPE framework form of contract. This framework agreement contains a number of Gateways that approximate to the RIBA Stages. The client signs an order for each Gateway when ready and has the option not to appoint for the next Gateway without incurring further liability. This is considered to be important for this project from a risk management point of view, as a policy decision has been taken not to authorise any Gateway until sufficient funds are available to complete it.

As the project is being let under the New Engineering Contract (NEC) design and build form of contract, the main contractor has formal responsibility for selection and appointment of the design team. However, it was agreed that (without transfer of liability), given the specialist nature of the development, consultant selection would also be supported by members of MSAS with an understanding of the required outcomes from an operational perspective. The core design team tendered on the basis of a balanced score card and staged fee proposals through to the end of the project and have now been appointed.

Under the Scape Ventures design and build project approximately 85% of the cost is spent through the procurement of sub-contractors and consultants, with the rest mostly being main contractor prelims and overhead/profit.

The selected main contractor works with local supply chain partners to enhance local economies and the communities in which they work. Their approach is based on:

• Qualitative selection of appropriate key partners with aligned skill sets required for the relevant work packages.
• Early engagement to Identify and address possible issues and long lead-ins
• Ensuring availability of resources/materials at design stage
• Establishing clear delivery commitments

They currently work with 170 key local supply chain members in the Nottinghamshire area consisting of 103 subcontractors (43% of list) and 67 suppliers/plant hire companies (51% of list). They actively engage with, and support, local supply chains through mentoring, training, and awareness events.

The supply chain partner list is used to provide a short list of possible supply chain tenderers for each works package. The companies included are chosen for their known ability to deliver on:

• Quality
• Health and safety record
• Commercial competitivity
• Local spend (locality of business and its workforce)
• Support for social and environmental initiatives

To meet the social value performance metrics and ensure that positive impact on the local economy is considered during the construction phase, the selection process also considers the postcodes of the proposed supply chain, distance from the project, and the potential for apprenticeships.

Woodhead then send out the tender packages with aligned contract terms to the selected short list supply chain and collate correspondence and responses received. Supplier selection meeting(s) are then held with the client to assess the submitted bids and, using a balanced selection approach, decide on the preferred bidder.

Occasionally there is a need to single source suppliers, in agreement with the client, to provide cost certainty for some key elements of work during the early design stages. These contractors will have proven quality health and safety and social value commitments, and their costings are benchmarked against recently delivered schemes to ensure commercial alignment.

Who will lead on the procurement and contractor management on this bid and explain what expertise and skills do they have in managing procurements and contracts of this nature?

The project will be delivered through the MSAS charity CIO. Their appointed project manager is Dr Steve Wallace. Steve has spent much of his career managing brownfield remediation and redevelopment projects in his roles as Head of Construction in British Gas Property and National Grid Property, and until 2012 was Group Head of Climate Change and Environment at National Grid. He has delivered many full-scale innovative brownfield regeneration technology demonstration projects and has managed field based multi-disciplinary R&D projects funded by UK research council and EU grants. Throughout this work he has managed diverse supply chains of contractors, consultants and specialist advisors at both portfolio and site development level, with portfolio responsibility for a budget of up to £60 million per annum and a brownfield remediation provision of over £500 million. A case study of one of Steve's projects is attached.

The main contractor has been selected through the SCAPE Ventures framework route, which builds on the SCAPE For the Public Sector (Procure) set of framework contracts used by local authorities as described in our response to the previous question.

Legal advice is provided by Browne Jacobson LLP on a pro bono basis. Finally, Pick Everard (UK based multi-professional consultancy practice, operating primarily in the built environment) have been appointed to provide supporting quantity surveyor and project management support to the MSAS Project Manager.

Are you intending to outsource or sub-contract any other work on this bid to third parties?

As this is a construction project procured on a design and build basis, all of the spend except for some specialist consultancy services will be delivered through the main contractor and their appointed supply chain. The main contractor has already been selected through competitive tender as described in the previous sections. Given the challenges associated with repurposing an existing underground Victoria reservoir, part of the contractor selection process included evidence of working on previous heritage projects. Other factors (in addition to cost) in the balanced scorecard assessment included environmental measures (e.g. use of sustainably sourced materials), social (engagement with the local community), use of local companies and labour (including apprentices) during the construction phase, and project management quality criteria based on previous performance and client feedback.

A similar set of criteria, but with slightly different balanced scorecards, were developed for procurement of the architect and engineering (civil and structural) consultants. As fit out of a planetarium is a specialist activity, all five world-wide specialist planetarium companies were invited to submit proposals, including for being a member of the core design team. This specialist provider has now been appointed and their input has been key to the development of the designs.
Performance of the main contractor (and hence the performance of their sub-contractors) will be measured using established SCAPE Ventures processes, KPIs and progress meetings with the assigned SCAPE project manager. In addition to the KPIs, SCAPE has developed a TOMs-based (Themes,

Outcomes, Measures) approach to social value, in partnership with the Social Value Portal.

These outcomes and measures are economic, social and environmental in nature and have been developed through discussions held over 18 months and across 40 institutions. The National TOMs provide a simple, intelligible methodology and reporting standard to enable benchmarking across the UK. SCAPE has worked with the Social Value Portal to implement the National TOMs, alongside KPIs, as the basis of social value delivery in all its frameworks, providing clients with the flexibility to set appropriate social value targets to align with national priority outcomes, alongside their policies and local needs. The Social Value Portal also provides independent verification and audit of the social value data.

Once appointed, framework delivery partners report on performance against the measures in the TOMs matrix, alongside other contractual KPIs, to retain a streamlined reporting process.

How will you engage with key suppliers to effectively manage their contracts so that they deliver your desired outcomes

As described earlier in this application, the project has been let on a Design and Build basis through a SCAPE Ventures Framework Agreement. Using the Design and Build procurement option ensures early contractor involvement and therefore an opportunity for early mitigation of any identified risks. An advantage of this approach is that the SCAPE partners in the Framework Agreements were pre-selected through a rigorous procurement process. The Framework Agreements have embedded schedules, KPIs and terms and conditions. The starting point for selection of a contractor from the Framework was to review the comprehensive list of performance indicators gathered from previous projects, thus providing assurance of the contractor's capabilities to deliver a project of this scope and scale. The contractors were then invited to submit written proposals and invited for interview.

The appointment of a contractor from the SCAPE Framework is broken down into a number of 'Gateways', each of which approximates to one of the RIBA stages. The client signs each Gateway at the appropriate point in the programme but is under no obligation to do so. That is, if the client feels that the contractor's performance in the previous Gateway was not satisfactory, or that the contractor no longer has the capability to deliver, it is possible to terminate the agreement without penalty and select a new contractor. This is a significant incentive for the supplier to perform. There is another contractor already prequalified through the SCAPE Framework Agreement, so in a worst case scenario where the chosen contractor goes into administration, whilst there would be disruption, it would be less challenging to appoint the new contractor than if this project had been tendered outside of a Framework Agreement.

Prior to signing each Gateway, a set of objective and performance indicators are agreed, and the contractor is then monitored and measured against those indicators. As well as the usual within project management meetings (see later), the SCAPE Framework included a requirement for quarterly progress meeting. The QPM has a comprehensive agenda, and the following is a list of some of the QPM items that are particularly relevant to this management of supplier risks and performance:

i) Review operating (including performance) issues in relation to the Contractor.
ii) Review the implementation of such measures as are necessary to deliver Continuous Improvement in accordance with the Continuous Improvement Plan.
iii) Act as the primary review body for managing the Contractor's performance.
iv) Review the Early Warning (risk) Register.
v) Review the level of resources which the Contractor is making available.
vi) Review the operation of Performance Indicators and agree any improvements.
vii) Review the performance and compliance audit reports.

A critical element of this project is the installation of a state-of-the-art planetarium. Following competitive tender, this element of the work has been sub-contracted to a specialist supplier with world-wide experience of similar installations. To ensure that their proposal was fit for purpose (and, in more general terms, that the whole final offer is fit for purpose), drafting of the tender specification was supported by the manager of ThinkTank Planetarium, Birmingham, who is also a member of our project board. This is a performance based specification that the specialist supplier will be measured against as the project progresses.

During the construction phase, client led monthly project meetings will be held with representatives from the main contractor, architect, engineer (structural and civil) and planetarium provider. Pick Everard (PE) have been appointed by MSAS to provide client side cost consultancy and project management support in this phase. The role of PE will be to formally administer the construction contract and also to review the monthly invoices from the contractor to ensure that they match the value of work done and therefore are appropriate to pay. As the cost plan is built up from a detailed schedule, the cost consultant will verify that each element is being delivered for the agreed budget. Whilst the cost plan included a 10% risk allowance, this can only be spent by the contractor following client approval. By that stage, the contractor will be working to a well defined design that will include materials and quality specifications. Regular inspection as the works progress will ensure that the design is being delivered in accordance with these criteria. As the project will be using the Design and Build form of contract, the main contractor is liable for any non-performance in their supply chain.

Set out how you plan to deliver the bid

The delivery plan key milestones are provided in Table D P1 of the attached ‘Costings and Planning’ workbook. The delivery plan is broadly divided into project delivery (i.e., delivery of the capital project that is the subject of this bid) and operational delivery (i.e. ensuring sustainable operational management once the new centre is opened).

The overall project delivery team is led by the MSAS Project Manager under the delegated authority of the MSAS Trustees. The organisational structure shown in Table 7.1 (page 93) of the Business Case is the one currently in use for delivery of the Towns Fund investment and the same structure will be used here.

Most of the spend will be directed through the ‘Design and Build’ team, which is led by the main contractor, reporting to the MSAS Project Manager. The main contractor has appointed a core team of specialist consultants consisting of an architect, engineers (civil and structural), and specialist planetarium provider to deliver the designs and will appoint subcontractors to deliver the specific elements of the building. Specialist planetarium provider, RSA Cosmos, has been appointed to design and fit out the planetarium.

Strategic oversight is provided by the Project Board and MSAS Trustees. The MSAS CIO is the legal entity named on all contracts.

A funding sub-group and a communications/marketing team have been established.

Circa 95% of the project spend will be through the design and build contract led by the main contractor. This contract contains stage gates where the client is in control of whether to appoint for the next stage or not. This approach is critical to the project as it means that the client can hold the project at any stage gate until it is confirmed that sufficient funds are available to proceed.

Milestones for the project are: submission of the planning application – September 2022; go/no-go on instructing RIBA 4 (technical design) – November 2022; go/no-go on instruction to mobilise to site – May 2023; practical completion – October 2024. Monthly project delivery meetings will be held once a month on site, with progress and invoices verified by the

appointed client-side QS/PM (Pick Everard).

A critical path assessment shows that receiving planning permission and receiving commitments for the matched funding have the most significant impact on delivery date and viability.

An organisation structure has been developed for the operational phase that builds on the experience of managing the existing Sherwood Observatory. This consists of a board of Trustees that sets strategic direction; a specialist board of senior advisors on matters such as education, science, funding opportunities, links to the local community, visitor attractions, and policy/strategic direction; a committee to support the membership scheme, volunteers and the development of science content; and an operations team responsible for day-to-day delivery and management of the facilities. More details of the operational plan are provided in Section 7.3 (pages 102-106) of the Business Case.

Demonstrate that some bid activity can be delivered in 2022-23

During the time window for determination of this Levelling Up bid, the team will be progressing the RIBA Stage 4 design, anticipated to start in November 2022. A contribution to those costs would come from this funding. The estimated cost of RIBA 4 is £100k. In the Costings and Planning workbook, we have assumed that the Levelling Up Round 2 fund will contribute to 50% (£50k) of these costs as we understand that the dates for formal notification of the outcome of this application range from October to December 2022. The 50% contribution assumes that we are notified of the award in December. If notification is made in October, then a greater proportion of the RIBA 4 costs could be assigned. There may also be the potential to start some early enabling works, but this has not been assumed in our spend profile.

Risk Management: Set out your detailed risk assessment

A risk register is provided in Appendix 7.2 (page 116-117) of the attached Business Case. This is the standard form of risk register used across the Towns Fund Investment Programme for Kirkby and Sutton.

Risks with residual scores of 5-12 are defined as those risks that don’t pose an immediate threat but should be kept under review. At present, there are no residual risks that sit above a score of 12. Those risks that sit between 5 and 12 are discussed in more detail below:

Risk 1.1 (Score 9) Health and Safety incident associated with the existing structure. Whilst there is no public access allowed without permission/supervision, there is a falls injury risk for trespassers due to failure of the existing edge protection. New edge protection has now been put in place and the risk score will be reduced in the next iteration.

Risk 2.2 (Score 6) Protected species use site so development cannot proceed. Whilst the two ecological surveys completed so far have not found protected species, a risk remains that new species colonise the site. This risk is relatively low as current activity on site makes it unattractive.

Risk 2.7 (Score 12) Loss of car park due to Golf Club taking land back. The Golf Club committee had indicated willingness to sign a long lease but progress is slow. Currently, this is considered to be a programme timing risk rather than a viability risk as our architect has designed a revised car parking scheme to mitigate any long term impact associated with not reaching an agreement.

Risk 3.1 (Score 8) Brexit risk on supply chain/cost. The current cost plan and programme includes allowances for this by including an estimate of import tariffs, however, the level for some products remains under review. There is also scope to cover any unforeseen costs in the general project contingency

allowance.

Risk 3.4 (Score 6) Individual costs increase. At this stage of the design, we have good knowledge of the construction costs. An inflation allowance has been included in the cost plan and there is also a general project contingency within the stated budget.

Risk 3.5 (Score 6) Project costs increase once construction has started. Early contractor involvement minimises this and during the design stage, elements of the project have been de-risked through intrusive site investigation and surveys.

Risk 3.6 (score 12) Funding applications unsuccessful. A funding strategy is in place and is being rolled out. This risk score will remain at 12 until at least one further substantial funder (including this bid) has confirmed support. A score of 12 has been chosen as the outcome of a bid is unknown until it has been assessed.

Risk 5.1 (Score 6) Too much delivery risk rests on MSAS PM. This has been significantly mitigated as a project team has been assembled and Pick Everard have been appointed to provide support services during the construction phase.

Provide details of your core project team and provide evidence of their track record and experience of delivering schemes of this nature

The project will be delivered by MSAS who have selected Dr Steve Wallace as the Project Manager (PM). A case study of a similar value project previously managed by Dr Wallace is attached. This is an article from New Civil Engineer magazine. A more detailed, full case study is available on request.

A Project Board was established in January 2020. Its role is to provide strategic oversight to the project and to liaise, steer and make recommendations on the overall organisation and management of the project during these phases and in preparation for the operational phase. The members of the board are:

Chair - Martin Rigley (MBE) – As both a resident and owner of a business in Ashfield, Martin is passionate about promoting Ashfield as a great place to run a business, live, visit, raise a family and be educated. He is Managing Director of Lindhurst Engineering, working across a broad range of sectors; utilities, energy, transport, construction, original equipment manufacturers, food & drink and bio science. Martin is a Chartered Engineer, holds Eur. Ing. status (FEANI European Engineer), is a Member of the Institute of Mining, Metallurgy and Materials and is a Member of the European Mentoring & Coaching Council. He is currently a board member of both East Midlands Chamber of Commerce and Vision West Nottinghamshire College. Martin is Chair of Discover Ashfield and he was awarded an MBE in the 2016 New Years' Honours list for services to Business & Innovation.

Liz Barrett (OBE) – Liz is a lifelong resident of Ashfield with a passion and commitment towards community regeneration. She is the Principal of ATTFE which operates in the north Nottinghamshire area delivering learning to people aged 16+ supporting them to upskill, gain new knowledge, improve their quality of life and/or their employability opportunities. She is an active Rotarian, a director of several local charities including a children's radio station, a social eating charity and a homeless eye care charity. For the past fifteen years she has been part of a patient participation group championing key local health agendas. She is also a school governor. She loves sharing time with her family, walking, photography and enjoying our beautiful country. Liz was awarded an OBE in the 2022 New Years' Honours list for services to education.

Paul Humphreys – Paul started his own business in 2005 with support through Business Link. Four years later he'd sold the business and joined Business Link as part of their advisory team. Paul is now Senior Innovation and Growth Specialist at Innovate UK EDGE. His passion and experience lies within sales

and marketing and he's used this expertise to help businesses create strategies that see them grow and thrive.

Colin Hutcheson (planetarium specialist) - Colin has been presenting in the planetarium at ThinkTank for over 13 years, taking over the running of it in September 2013. Before moving to Birmingham, he worked for 2½ years in At Bristol as one of the first members of the Live Science Team. In this time, he has guided thousands of people to the wonders of the night sky, organised many events, engaged with the media and recently combined his love of music and astronomy to bring a string quartet into the dome. In March 2019 he project managed and coordinated a £0.5 million planetarium upgrade. Colin has also been on the council of the British Association of Planetaria (BAP) for 8 years, becoming the second recipient of the Terrance Murtagh Award for Technical Achievement in 2016.

Scott Creed (MSAS Treasurer) - Scott studied Business and Financial Services at degree level. He has been a member of MSAS for 15 years, during which time he has been very active in society activities, acting as a committee member and trustee responsible for public events for two years, deputising on a temporary basis for many other committee/trustee positions, and has been Treasurer since May 2018.

The MSAS board of trustees have the legal responsibility for management of the charity. In 2020, the charity was reconstituted as a CIO as it was felt that this better met the needs of the expanded offer. Whilst the project board and delivery teams can make recommendations, formal sign-off of any decisions that cannot be made under delegated authority is by the MSAS Trustees. The Trustees are elected on an annual basis by a vote of the membership at the AGM. The MSAS CIO is the named organisation on formal contracts and agreements.

Set out what governance procedures will be put in place to manage the grant and project

Please refer to the Table 7.1 (page 93) in the Business Case for the organisational structure. Specific governance processes are in place as follows:

i) Grant approval: For the Towns Fund and LUF2 investments, the Accountable Body is Ashfield District Council which has responsibility for ensuring the Local Assurance Framework is in place, meets the standards set out by Government and that all funding decisions are made in accordance with it. The Section 151 officer at Ashfield District Council ultimately provides assurance of proper use of Government Funds and Governance Procedures. The Council will have overall responsibility for managing the grant and the project and will follow its standard procedures for capital projects which includes reporting to Cabinet and Full Council, senior management/leadership teams and the Regeneration Board, as well as the Discover Ashfield Board.

ii) General in Project Approvals: The MSAS PM submits papers for approval to the monthly Trustees Committee Meeting as needed. Recent examples include the recommendation to appoint the main contractor following the SCAPE tender assessment, pre-approval for the budget paper submitted to the Discover Ashfield Board for the design phase, and recommendations to appoint individual suppliers. Contractual commitments are not made where there are insufficient available or uncommitted funds to cover the costs. For major strategic decisions, the Trustees can choose to seek approval from the whole MSAS membership at the AGM (or at a SGM if time critical). For example, the membership was asked to endorse the current strategy for the SDC/Planetarium at the 2021 AGM. All decisions taken at the Trustees meetings and AGMs are minuted and signed off by the Chair as a true record of the meeting.

iii) Contract Signing: Contracts are reviewed by Browne Jacobson LLP before a recommendation is taken to the Trustees Committee Meeting for signing. Under the charity constitution, all contracts must be signed by two Trustees.

iv) Invoice Payment: Work packages for the current design phase have mostly been let on a fixed price basis following tender, the budgets for which were pre-approved by the Trustees before the contracts were let. When an invoice is received it is checked by the MSAS PM to ensure that it matches the value agreed in the contract and the proportion of work done in that period. The MSAS PM then forwards the invoice to the Treasurer to make the payment. Any variances would be challenged before the payment is made (although this has not happened yet).

In recognition of the typically higher values, invoice approvals during the construction phase will be a multi-step process. It is estimated that some 95% of the spend will be incurred by sub-contractors to the main contractor (Woodhead Construction). Woodhead have an internal process for verifying that their supply chain invoices are appropriate before adding their direct costs and sending the invoice for that period to the client. MSAS have appointed Pick Everard to provide QS and PM services during the construction phase. The Pick Everard QS will check that the value of the invoice is appropriate and that it has been issued in accordance with the contract, and then recommend that the client makes the payment. The MSAS PM will then authorise the Treasurer to make the payment.

v) Financial Reporting: A project status report, that includes a financial report, is provided to the ADC Delivery Group on a monthly basis. The MSAS Treasurer provides cost reports to the monthly MSAS Trustees Committee Meeting and there is a standing agenda item for the report to be discussed and approved (or rejected). Annual accounts are included in the members' packs for the AGM where a resolution is made to approve or reject them. In recent years, annual income has exceeded the threshold where the Charity Commission require that the annual accounts are inspected and signed off by a chartered accountant. This service is currently provided on a pro bono basis by Pells Chartered Accountants. Annual income, in the form of grants and donations, will increase during the SDC/Planetarium development and will exceed the threshold where a formal audit of the annual accounts will be required. A charted accountant will be appointed to do this at the appropriate time.

vi) External Oversight: External oversight is provided through the ADC Towns Fund Delivery Group. A highlight report that covers progress, next steps and risks is submitted to the Delivery Group on a monthly basis and discussed at the monthly Delivery Group meeting.

If applicable, explain how you will cover the operational costs for the day-to-day management of the new asset / facility once it is complete to ensure project benefits are realised

Mission Statement: The project will create an iconic attraction that will draw in visitors from outside of the area, increasing spend and footfall within the district of Ashfield. It will be a community resource, a blank high-tech canvas that can be used to display visual arts. It will be a centre for learning that will inspire people to follow STEM career paths, leading to greater prosperity in the area

The new centre will be operated by the MSAS CIO, an organisation with many years of experience of successfully conducting outreach from the existing Sherwood Observatory. A detailed spreadsheet business plan model was developed to consider the income generation potential, and costs associated with the new facilities. The key features of the model are described below:

Overheads: Overheads have been based on operational costs for the existing facilities but uplifted for the expanded offer with additional costs for new items. The plan includes a 5% overheads contingency.

Planetarium Equipment Fund: An allowance has been made for an annual contribution of £25,000 to a holding account to cover upgrade of the planetarium equipment at year 10. This is not strictly necessary as some currently operational planetariums do not do this, but it has been included as best practice and to provide a margin in the business planning assumptions.

Ticket Prices: Income is generated from entry tickets and advanced block bookings including from schools, uniformed childrens groups and adult groups. Price points for the various offers were assessed through review of the comparator organisations, by direct review of the visitor/potential visitor surveys and direct experience of what current visitors are willing to pay. One of the staff employed at the new centre will be responsible for marketing and taking bookings.

Surveys of visitors to the existing observatory, potential visitors to the new facilities, and schools have been used to inform the day-to-day operational design as well as assess demand. The visitor offer will consist of:

Open Evenings and Solar Days:. The full range of facilities will be open. There will be self-guided exhibits supplemented by short technical presentations. Visitors will be invited to view the sky through the observatory's telescopes. Outdoor seating and picnic tables will be available.

Group Visits: Typically, only the observatory and planetarium will be open. The ability to open different segments of the site has been built into the design as it means that less resource is required if non-operational parts of the site can be isolated.

Schools: School groups are a key target audience. School visits will either be for a half day or whole day and would be activity based. Organisation of the visit will depend on the specific wishes of the school, with the arrangements being flexible and dependent on the size of the group and the available time. The planetarium has been sized to accommodate two school classes.

Standalone planetarium shows: Tickets will be sold for access to the planetarium only. A small, self-exhibition may be opened for visitors waiting between shows. A portfolio of planetarium shows of different types will be developed in-house (this is usual practice for planetariums of this size). In addition, we will become part of a planetarium user community where in-house content is exchanged to keep the offer fresh and to ensure that audiences return. Premium, high production value, full dome shows are also available from professional content providers.

Membership scheme: The membership scheme is an important way of delivering benefits. Whilst the total numbers of individuals will remain a small proportion of overall visitor numbers, the members will visit multiple times over the course of a year and have opportunities to develop and practice new skills that can provide benefit to their employers and prospective employers. For retired members it provides a means of social interaction and a connection to younger generations.

The centre will open in 2024/25 and it is predicted that it will show a small loss in the first year due to having to hire the staff for training and testing purposes before opening and then show a profit in all subsequent years. The opening loss will be covered by the starting MSAS balance sheet position. The model was stress tested assuming a 10% reduction in income and still shown to be financially sustainable. A detailed description of the operating financial model, including figures showing the outcome of the stress testing, is given in Section 6.5.2 (pages 82-86) of the Business Case.

Upload further information (optional)

Set out proportionate plans for monitoring and evaluation

Our monitoring and evaluation plan is detailed below. Please also see our response to the question on delivery of outputs. The plan includes the monitoring being used for the Towns Fund project.

i) Inputs: The inputs to the intervention are public sector funding totaling £5.361 million from a combination of the Towns Fund investment and this Levelling Up Round 2 bid. A further circa £1 million will be provided from

private sector sources. In addition, pro bono support is currently being provided by companies and volunteers. The financial inputs are being monitored through the already established governance processes described elsewhere in this application. Pro bono hours are collated by the Project Manager. As at 28/6/22 pro bono time stood at over 2100 hours.

ii) Activities: The activities are design of the new science discovery centre and planetarium, make funding applications to secure the required budget, and construction of the new centre during 2023 and 2024. Monitoring is through the established project management system, which includes key milestones and monthly progress meetings with the ADC Delivery Group. This is supplemented by papers and presentations to the Discover Ashfield board on an as needed basis.

iii) Outputs: The outputs are categorised into regeneration and cultural. The regeneration outputs are: number of derelict buildings refurbished (1); new cultural facilities (1); new education space created (1). The cultural output is number of volunteering opportunities supplied. The regeneration outputs will be achieved on practical completion and hand over of the new facilities by the main contractor. The out turn cost of the intervention will be assessed against the current budget. The number of volunteering opportunities will be measured by MSAS once the new centre has opened through keeping a log of the number of volunteers supporting each event and by reporting the growth in MSAS membership. The log of volunteers will be kept by one of the two staff whilst the growth in MSAS numbers will be measured by the MSAS Secretary.

iv) Cultural Outcomes: The cultural outcomes are change in the number of visitors to cultural venues. This will also create a positive change in visitor spending and hence the local visitor economy. The outcome will be measured by continuous monitoring of visitor numbers to the new facilities. As most visits will be booked in advance through an electronic booking system, MSAS have a readily available means of collecting the data. Change in direct visitor spend will be monitored by the Treasurer via the MSAS annual report and accounts, which will show an increase in turn-over. Indirect impact on the visitor economy will be more difficult to measure as it will be spread over many businesses in the area (shops, food outlets, other visitor attractions etc), so this will probably have to be modelled using the approach adopted to calculate the visitor economy BCR, with the input being the actual visitor numbers and direct spend at the new centre.

v) Educational Outcomes: Education outcomes will be measured by the number of learners enrolled in new education/training courses and by the number of learners/trainees/students attending. As the new centre will be one part of the education value chain, it is more challenging to measure the long-term educational impact (for example, by assessing how many educational visitors are influenced to make a choice to follow STEM based education and/or career paths). However, many schools in the area will be repeat visitors as their cohorts of students change. This means that we will have a network of formal educator contacts that we can survey to assess changes in educational outcomes. As we are not experts in qualitative research of this type, our intention is to discuss options for a collaborative research project with one of our two local universities.

The values for the visitor economy and education visits outcome measures are shown in Table 7.4 (page 113) of the Business Case.

Senior Responsible Owner Declaration

Upload pro forma 7 - Senior Responsible Owner Declaration	Levelling Up Fund applicant details Proforma 7.pdf

Chief Finance Officer Declaration

Upload pro forma 8 - Chief Finance Officer Declaration	Levelling Up Fund Proforma 8 CFO declaration.docx

Publishing

URL of website where this bid will be published	https://www.ashfield.gov.uk/

Additional attachments

Additional file attachment 1

Upload attachment	V7 Full TF and LUF2 Business Case Sherwood Observatory 27.7.22.docx

Additional file attachment 2

Upload attachment	Lee Anderson MP Support.docx

Additional file attachment 3

Upload attachment	Chris Lintott letter of support.pdf

Additional file attachment 4

Upload attachment	IPS_Sherwood.pdf

Additional file attachment 5

Upload attachment	west notts letter of support May 2022.docx

Additional file attachment 6

Upload attachment	Business prospectus Short Form 2.0.pdf

Additional file attachment 7

Upload attachment	Steve Wallace project case study.docx

Additional file attachment 8

Upload attachment	Levelling Up Fund Proforma 5 Statement of compliance.docx

Additional file attachment 9

Upload attachment	LUF Assurance 2022_.docx