

**ITEM 9**

**REPORT TO: WEST OF ENGLAND COMBINED AUTHORITY**

**DATE: 14 October 2022**

**REPORT TITLE: INVESTMENT FUND BUSINESS CASES  
INCLUDING HYDROGEN SUSTAINABLE  
TRANSPORT ECONOMY ACCELERATOR (HSTEA)**

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**Purpose of Report**

1. To consider Full Business Cases and funding allocations

**Recommendations:**

**The Committee is asked to:**

1. To agree the Full Business Case for the HSTEA and award total funding of £2.5m, consisting of the Green Recovery Fund (£0.9m), Future Transport Zone (£1.2m) and Innovation for Renewal and Opportunity Influence Fund (£0.4m) with the delegation for agreeing the final cost profile and revised outputs to the Combined Authority Chief Executive in consultation with the Chief Executives of the constituent Councils
2. That following the approval of the Outline Business Case for the Arena Infrastructure Package (known previously as the North Fringe Infrastructure Package) at the July Combined Authority Committee, it is recommended that an allocation of £6.637m be made from

## Investment Fund, subject to Full Business Case submission by March 2023

### Voting arrangements

Decision requires majority agreement of Committee Members in attendance, or their substitutes (one vote representing each Authority) and including the West of England Combined Authority Mayor.

### Background

- As reported to the Committee in January, in order to re-establish a five year programme, the time horizon for the Investment Fund programme has been extended by a further three years to March 2026. The total funding over the period to March 2026 amounts to £450m including overprogramming. With the decisions taken at the Committee in September the Investment Fund headroom stands at £22.4m. As shown in Figure 1, the funding awards and allocations set out in this report would reduce the headroom to £15.8m.

**Figure 1: Summary of Investment Programme to 2026 by Priority Theme**

Funding Awards and Allocations £000s	Sep 2022	Oct 2022
<b><i>Transport Infrastructure</i></b>		
Approved Awards and Allocations	151,439	158,076
Associated 'tail' required to deliver all projects up to March 2026	17,611	17,611
<b>Total Investment in Transport Infrastructure</b>	<b>169,050</b>	<b>175,687</b>
<b><i>Housing, High Streets and Green Infrastructure</i></b>		
Approved Awards and Allocations	80,018	80,018
Associated 'tail' required to deliver all projects up to March 2026	719	719
<b>Total Investment in Housing Infrastructure</b>	<b>80,736</b>	<b>80,736</b>
<b><i>Business and Skills</i></b>		
Approved Awards and Allocations	129,320	129,320
Associated 'tail' required to deliver all projects up to March 2026	18,029	18,029
<b>Total Investment in Business and Skills Infrastructure</b>	<b>147,349</b>	<b>147,349</b>
<b><i>Leverage Match Fund / Other</i></b>		
Funding put aside to respond to external funding opportunities	<b>9,061</b>	<b>9,061</b>
Approved CA set up, operating costs and elections up to 2026	<b>9,768</b>	<b>9,768</b>
Provision for Inflation	<b>11,600</b>	<b>11,600</b>

Headroom	22,436	15,799
Total Investment Programme up to March 2026	450,000	450,000

### Hydrogen Sustainable Transport Economy Accelerator

- A Full Business Case for the Hydrogen Sustainable Transport Economy Accelerator (HSTEA) project was submitted by the University of Bath seeking £3.8m funding from the Green Recovery Fund (Renewable Energy allocation).
- The total project value is £11.3m, with match funding of £2.5m from Government's UKRPIF programme, and £5m from industry partners using the new facilities to undertake R&D in the region. The funding sources and proposed profile within the Business Case are shown below.

£m	22/23	23/24	24/25	25/26	26/27	Total
University of Bath via UKRPIF	£2.50					£2.50
Industry	£0.28	£1.87	£1.95	£0.73	£0.17	£5.00
Funding Requested	£1.11	£1.83	£0.56	£0.22	£0.09	£3.80
Total	£3.90	£3.69	£2.50	£0.95	£0.26	£11.30

- The HSTEA project will create a new and unique 'green hydrogen' production, storage, and research facility within the Institute of Advanced Automotive Propulsion Systems (IAAPs) at Bristol and Bath Science Park. It will deliver collaborative academic-industry commercialisation of innovation and support to start-ups and small businesses, to prepare for and capture growth opportunities from the hydrogen economy. The government's 'UK Hydrogen Strategy' estimates that by 2050 the hydrogen economy will create 100,000 jobs and £13bn GVA, driven by application in road transport, maritime and aviation sectors. The Executive Summary from the Full Business Case is shown in Appendix 1.
- Combined Authority funding is specially sought for a new collaboration centre to grow the region's advanced engineering cluster through access to equipment, research and business support services focused on developing and operationalising hydrogen technology. This will include the UK-first 'liquid hydrogen and cryogenic cooling' capability to deliver the power demands of zero emission advanced propulsion technologies. The project will deliver 254 gross new jobs and safeguard 55, adding £33.5m to the West of England economy each year.

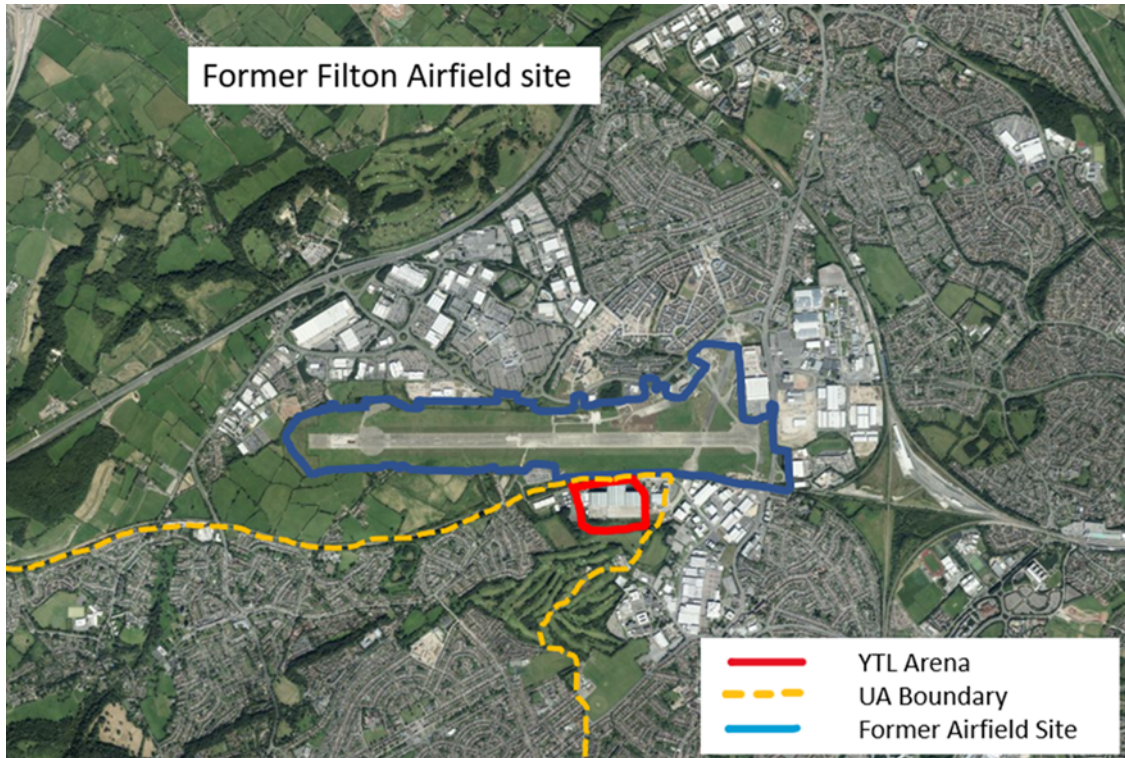
7. The financial ask was greater than funds available in the Green Recovery Fund and therefore other funding sources have been explored alongside conversations with the University on the critical amount of funding required to progress the aims of the project.

*Recommendation to agree the Full Business Case and award funding of £2.5m from the Green Recovery Fund (£0.9m), Future Transport Zone (£1.2m) and Innovation for Renewal and Opportunity Influence Fund (£0.4m). with the delegation for agreeing the final cost profile and revised outputs to the Combined Authority Chief Executive in consultation with the Chief Executives of the constituent Councils*

## **Arena Infrastructure Package**

### *Context*

8. The former Filton airfield, which sits on the administrative boundary between South Gloucestershire and Bristol, is the largest active brownfield development site in the West of England (see Figure 1). The South Gloucestershire Core Strategy makes provision for approximately 5,700 new homes in new mixed-use communities, around 50 hectares of employment land and commercial uses. Whilst on the Bristol side of the boundary, planning permission was granted in 2020 to transform the historic Brabazon Hangers into a 17,000-capacity venue to put the Bristol region on the world stage for live music and entertainment. When complete, the Brabazon Arena will be the third largest arena in the UK. The Arena is a project of significant regional importance delivering considerable benefits to the West of England economy including 153 Full Time Equivalent (FTE) construction jobs, up to 580 FTE employment opportunities, some 120 indirect jobs, additional GVA of up to £31m per annum and linked trip expenditure of up to £735,000 per event.



**Figure 1 – Filton Airfield Site and Arena**

*Arena Infrastructure Package Scheme*

9. To deliver the Arena significant works are required to improve connectivity and transport infrastructure across the north fringe of Bristol. These infrastructure improvements will be delivered by the Arena Infrastructure Package (AIP) formerly known as the North Fringe Infrastructure Package.
10. As part of the planning consents in the area, S106 contributions in excess of £60m have been secured from the developers for transport infrastructure, as well as a requirement for the developer to undertake specific highway and transport improvements. As shown in the table below, this includes some £3.17m of S106 secured through the planning application for the Arena, of which £953k is direct match within the AIP Business Case.

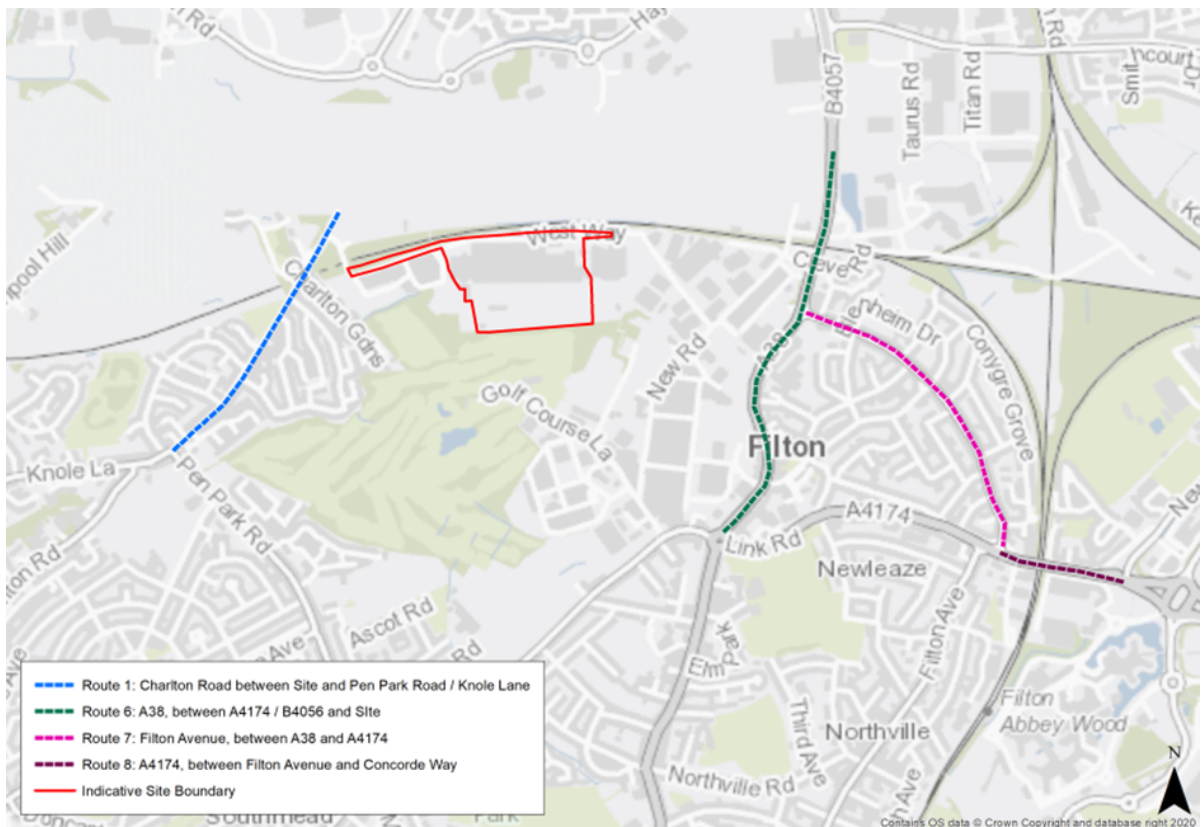
<b>Funding</b>	<b>£m</b>
Proposed Investment Fund Allocation (including £400k already awarded at Outline Business Case)	£7.037
S106 match funding	£0.953
Additional S106 funding not identified as match funding	£2.214



Total S106 funding secured through Arena application for related transport mitigation	£3.166
Total Project funding (Investment Fund plus S106)	£10.203

Note: In addition to the S106 contributions detailed above the developer is providing a range of other measures including highway improvements, a new footbridge across the railway line, bus infrastructure including a bus gate, on site cycle infrastructure, EV charging points, park and ride facilities and shuttle buses.

- Funding is being sought from the Investment Fund to deliver a wider package of transport improvements to address existing transport issues which would not meet the criteria for obtaining S106 contributions but would facilitate growth and sustainable travel in the area. As set out in the Outline Business Case approved in July, the AIP includes walking and cycling improvements on four routes (as shown in Figure 1) including segregated cycle provision, widened footways and signage and wayfinding, together with a package of traffic management improvements involving new and upgraded signals, relocating bus stops and traffic management systems.



**Figure 2 - Arena Infrastructure Package Proposed Walking and Cycling Routes**

*Programme and Funding*

- The key milestones for the delivery of the AIP and the planned Investment Fund drawdown, claimed in arrears, are shown below. The Full Business Case is expected to be considered at the January 2023 Committee meeting.

<b>Element</b>	<b>Key milestone completed</b>
Submission of Full Business Case	Nov 2022
Decision on Full Business Case	Jan 2023
Legal Agreement in place for Traffic Management	Jan 2023
Procurement for cycle schemes	Jun 2023
Consultation on Traffic Management	Jul 2023
Procurement of traffic management kit	Jan 2024
Traffic Management operational	Dec 2024
Completion of Cycle Schemes	Dec 2024

2022/23	2023/24	2024/25	Total
£0.95m	£3m	£2.69m	£6.64

*That following the approval of the Outline Business Case for the Arena Infrastructure Package (known previously as the North Fringe Infrastructure Package) at the July Combined Authority Committee, it is recommended that an allocation of £6.637m be made from Investment Fund, subject to Full Business Case submission by March 2023.*

## **Consultation**

- Engagement has taken place with officers in the West of England Combined Authority Constituent Unitary Authorities. Section 151 Officers across the region have been fully engaged as have the Chief Executive Officers in helping to inform the prioritised projects for investment.

## **Other Options Considered**

- All Business Case are required to set out in detail the full range of options considered and the reason the preferred option has been identified.

## **Risk Management/Assessment**

- Specific risk assessments will be carried out as part of any feasibility studies for projects in development and business cases are required to set out the way that risks will be managed and a risk register. All projects underway will maintain a specific risk register as part of the project management and monitoring arrangements.
- Financial risks are managed through the process for considering cost increases as set out in the Combined Authority Investment Strategy. The overall Investment Fund and Transforming Cities Fund programme will be regularly reviewed.

## **Public Sector Equality Duties**

22. The public sector equality duty created under the Equality Act 2010 means that public authorities must have due regard to the need to:
  - Eliminate unlawful discrimination, harassment and victimization and other conduct prohibited by the Act.
  - Advance equality of opportunity between people who share a protected characteristic and those who do not.
  - Foster good relations between people who share a protected characteristic and those who do not.
  
23. The Act explains that having due regard for advancing equality involves:
  - Removing or minimising disadvantages suffered by people due to their protected characteristics.
  - Taking steps to meet the needs of people from protected groups where these are different from the needs of other people.
  - Encouraging people from protected groups to participate in public life or in other activities where their participation is disproportionately low.
  
24. The general equality duty therefore requires organisations to consider how they could positively contribute to the advancement of equality and good relations. It requires equality considerations to be reflected in the design of policies and the delivery of services, including policies, and for these issues to be kept under review.
  
25. For projects seeking funding through the Investment Fund scheme promoters are required to include as part of their Full Business Case, an equality and diversity assessment and plan. These assessments are published as part of the Business Case on the Combined Authority website.

## **Finance Implications, including economic impact assessment where appropriate**

26. The financial implications for each proposal are set out in the body of the report. The Investment Fund allocations and awards are accommodated within the overall spending limit of £450m available up to March 2026.
  
28. Supporting economic growth is central to this funding stream, and promoters are required to include an economic case within the FBC for each scheme which sets out how the project will create jobs and GVA growth as well as delivering wider benefits. In line with agreed processes these FBCs are published on the Combined Authority website at the point of decision making.
  
29. The recommendations in the reports to this Committee would have the following implications on the project awards and allocations:



<b>Project</b>	<b>Source</b>	<b>Award/ Balance</b>	<b>Amount to be Utilised</b>	<b>Balance Remaining</b>
HSTEА	Green Recovery Fund	£12.7m,	£0.9m	£11.8m
	Future Transport Zones (capital)	£23.3m	£1.2m	Within DfT funding programme
	Innovation for Renewal and Opportunity	£6.717m	£0.4m	£6.317m
Arena Infrastructure Package		Headroom £22.4m	£6.637m	Headroom £15.8m
Bristol Temple Quarter Joint Delivery Team		-	£6.863m	To draw on funding allocation for Bristol Temple Meads Eastern Entrance within current programme

Advice given by: Richard Ennis, Interim Director of Investment and Corporate Resources

### **Legal Implications**

30. There are no additional legal implications arising from this report. Legality will be verified for individual projects through relevant due diligence prior to approving formal allocations.

Advice given by: Stephen Gerrard, Interim Monitoring Officer, West of England Combined Authority

### **Climate Change Implications**

31. On 19 July 2019, the West of England Combined Authority declared a climate emergency, recognising the huge significance of climate change and its impact on the health, safety and wellbeing of the region's residents. The Combined Authority is committed to taking climate change considerations fully into account as an integral part of its governance and decision making process.

Each report/proposal submitted for Combined Authority / Joint Committee approval is assessed in terms of the following:

Will the proposal impact positively or negatively on:

- The emission of climate changing gases?
- The region's resilience to the effects of climate change?
- Consumption of non-renewable resources?
- Pollution to land, water or air?

Particular projects will also be subject to more detailed environmental assessment/ consideration as necessary as part of their detailed project-specific management arrangements.

32. Each business case coming forward for decision on inclusion in the Investment Fund programme includes consideration of environmental sustainability which sets out how sustainability is being considered in the development of the project as well as during its operational stage.

### **Land /Property Implications**

33. All land and property implications are set out within the specific business cases and dealt with by scheme promoters.

Advice given by: Richard Ennis, Interim Director of Investment and Corporate Resources

### **Human Resources Implications**

34. There are no direct human resource implications arising from this report.

Appendix 1: Hydrogen Sustainable Transport Economy Accelerator Executive Summary

## Appendix 1

### Hydrogen Sustainable Transport Economy Accelerator Executive Summary

#### **The Context:**

In 2021, 42 countries endorsed the 'COP26 Breakthrough Agenda' – committing to catalyse the global growth of markets, jobs and economic development for clean technologies and sustainable solutions: with an immediate focus on Power, Road Transport, Steel, and Hydrogen. State developed hydrogen strategies are being formalised, marking the significant clean growth potential of hydrogen production with a rapidly growing market.

In line with this global push and building upon the 'UK Ten Point Plan for a Green Industrial Revolution' (November, 2020), the UK government outlined the 'UK Hydrogen Strategy' (August, 2021) estimating that by 2050, under a high hydrogen scenario, up to 100,000 jobs and £13 billion of GVA could be generated. Superseding these publications, the 'British Energy Security Strategy' (April, 2022) has committed to:

*“Doubling our ambition to up to 10GW of low carbon hydrogen production capacity by 2030... aiming to run annual allocation rounds for electrolytic hydrogen... designing, by 2025, new business models for hydrogen transport and storage infrastructure...(and) levelling the playing field by setting up a hydrogen certification scheme by 2025.”*

– British Energy Security Strategy, April 2022

Within the UK, the ambitious vision is predominantly being driven by leading organisations seeking to overcome the challenges of first mover disadvantages with the aim to gain significant shares in future markets; both nationally and internationally. However, huge unknowns remain across supply chains and value chains, underpinned by sparse opportunities for both academia and industry to address these challenges.

The West of England (WoE) is a region with world-leading, concentrated research strengths and innovative industrial ability. From Brunel and Concorde to the latest developments in robotics and virtual reality, the West of England has long been at the forefront of innovation and industrial advancements. The region's highly skilled workforce is fed by four prestigious universities with retention rates among the highest in the country, fostering original ideas, and helping to make the West of England a world-leader.

Today, strides are being made to understand the research profile of the hydrogen economy within the South-West. The South-West Hydrogen Ecosystem Partnership is undertaking a mapping of regional and national research and development capabilities commissioned by GW4 (due to be complete by the end of March 2022). However, through extensive industry engagement, the Institute of Advanced Automotive Propulsions Systems (IAAPS) have identified that there is sparsity of capability in clean hydrogen research and innovation within the South-West and that there are yet to be formal considerations to develop the hydrogen economy within the West of England.

As industry pushes ever harder to progress the decarbonisation agenda, it is becoming clearer that there is the opportunity in the West of England to consolidate upon the existing supply of centres of academic excellence and address the critical requirement for cross-cutting research and innovation of clean hydrogen generation, storage, distribution, and technology. This proposal defines an opportunity for the West of England to invest and contribute towards the development of the Hydrogen and Sustainable Transport Economy Accelerator (HSTEA). Centralising the region as a leader in the research and

innovation of clean hydrogen technology across the UK, and globally, and driving the long-term transition to a thriving green economy beyond existing regional and national plans.

### The Concept:

The HSTEAs is a cross-cutting collaboration between IAAPS, the University of Bath (UoB), SETsquared, a consortium of SMEs, multinational corporations, and business innovation and education specialists. This truly disruptive partnership is pivotal to the HSTEAs success and its delivery of a Hydrogen & Sustainable Transport (HST) Business Acceleration Hub and HST Industrial Research and Innovation Programme that will provide a novel green hydrogen production and research facility, programmes for collaborative academic-industry commercialisation of innovation and business support to start-ups and SMEs in the development towards the anticipated hydrogen economy.



The HSTEAs will be housed within the new IAAPS facility based at the Bristol and Bath Science Park to leverage the successfully awarded UKRPIF-funded Green Hydrogen Production Facility. This new capability to produce green hydrogen at IAAPS will serve as a significant asset towards research and innovation within the West of England region where experimental Hydrogen facilities are sparse.

In acknowledgement of the regional need for such a facility, match funding has been secured from industrial partners for research and development activities, highlighting the regional industry demand to progress the decarbonisation agenda.

The WECA funding will support delivery of the collaborative research and innovation programmes with these industry partners. Whilst a start-up and SME business acceleration hub will make further use of these facilities and accelerate the translation of research into real world outcomes.

As a collective, these initiatives compliment the West of England Combined Authority Climate Emergency Action Plan and Green Recovery plan and the commitment to becoming carbon neutral by 2030. Whilst also aligning with the wider West of England Combined Authority strategic economic, local

industrial and employment and skills plans and supporting the UK's net zero and hydrogen strategies. These initiatives will set the path for the rapid progress in reducing the largest sources of emissions, while supporting the regional and national economy to develop the skills, businesses and innovations needed for the long-term transition to a green economy.