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West Midlands Combined Authority

Housing & Land Delivery Board

Date: Wednesday 27 April 2022

Time: 10.00 am **Public meeting** Yes

Venue: Room 116, 16 Summer Lane, Birmingham B19 3SD

Membership

Councillor Mike Bird (Chair)	Walsall Metropolitan Borough Council
Councillor Zahoor Ahmed	Sandwell Metropolitan Borough Council
Councillor Peter Butlin	Warwickshire County Council
Councillor Matthew Dormer	Redditch Borough Council
Councillor Adrienne Fitzgerald	Cannock Chase District Council
Councillor Bhupinder Gakhal	City of Wolverhampton Council
Councillor Shabrana Hussain	Birmingham City Council
Councillor Ian Kettle	Dudley Metropolitan Borough Council
Chris Lawes	Coventry and Warwickshire LEP
Councillor Andy Mackiewicz	Solihull Metropolitan Borough Council
Sarah Middleton	Black Country Local Enterprise Partnership
Jo Nugent	Homes England
Councillor Jeremy Oates	Tamworth Borough Council
Councillor Richard Overton	Telford and Wrekin Council
Councillor Daren Pemberton	Stratford on Avon District Council
Councillor Ed Potter	Shropshire Council
Kevin Rodgers	West Midlands Housing Association Partnership
Dawn Ward	Greater Birmingham and Solihull Local Enterprise Partnership
Suzanne Ward	Environment Agency
Councillor David Welsh	Coventry City Council
Councillor Kristofer Wilson	Nuneaton and Bedworth Borough Council
Councillor David A Wright	North Warwickshire Borough Council

The quorum for this meeting shall be eight members.

If you have any queries about this meeting, please contact:

Contact Wendy Slater, Governance Services Officer
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AGENDA

No.	Item	Presenting	Pages
1.	Apologies for Absence (if any)	Chair	None
2.	Declarations of Interests (if any) Members are reminded of the need to declare any disclosable pecuniary interests they have in an item being discussed during the course of the meeting. In addition, the receipt of any gift or hospitality should be declared where the value of it was thought to have exceeded £25 (gifts) or £40 (hospitality).	Chair	None
3.	Chair's Remarks (if any)	Chair	None
4.	Minutes - 2 March 2022	Chair	1 - 6
5.	Quarterly Report on Housing & Land Portfolio Deliverables and Progress on Housing & Land Annual Business Plan	Gareth Bradford/ Rob Lamond	7 - 14
6.	Trailblazing Devolution Deal :Discussion Paper	Gareth Bradford/ Rob Lamond	15 - 22
7.	Advanced Manufacturing in Construction (AMC) : Enabling Infrastructure for Delivery for AMC in the West Midlands	Gareth Bradford/ Rob Lamond	23 - 92
8.	WMCA Housing Deal 2018 : Local Plans Progress Update	Gareth Bradford/ Amanda Holland	93 - 98
9.	WMCA Housing & Land Delivery Board Taskforces : Progress Update	Gareth Bradford/ Amanda Holland	99 - 106
For Information/ Noting			
10.	Local Transport Plan Consultation : Opportunities for Housing & Land Portfolio	Gareth Bradford	107 - 124
11.	Exclusion of the Press and Public Resolved: In accordance with Section 100A(4) of the Local Government Act 1972, the press and public be excluded from the meeting during the consideration of the following items of business as they involved the likely disclosure of exempt information relating to the business affairs of any particular person (including the authority holding that information).	Chair	None
12.	Appendix 1 to Quarterly Report -Single	Rob Lamond	125 - 128

	Commissioning Framework Schemes		
13.	Appendix 2 to Quarterly Report -Performance on Devolved Housing & Land Funds - Dashboards	Rob Lamond	129 - 136

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West Midlands Combined Authority

Housing & Land Delivery Board

Wednesday 2 March 2022 at 10.00 am

Minutes

Present

Councillor Mike Bird (Chair)	Walsall Metropolitan Borough Council
Councillor Zahoor Ahmed	Sandwell Metropolitan Borough Council
Councillor Shabrana Hussain	Birmingham City Council
Councillor Ian Kettle	Dudley Metropolitan Borough Council
Councillor Andy Mackiewicz	Solihull Metropolitan Borough Council
Councillor David Welsh	Coventry City Council

Participating via MS Teams

Councillor Peter Butlin	Warwickshire County Council
Councillor Matthew Dormer	Redditch Borough Council
Sarah Middleton	Black Country Local Enterprise Partnership
Councillor Richard Overton	Telford and Wrekin Council
Councillor Ed Potter	Shropshire Council
Kevin Rodgers	West Midlands Housing Association Partnership
Councillor Stephen Simkins	City of Wolverhampton Council
Suzanne Ward	Environment Agency
Councillor Kristofer Wilson	Nuneaton and Bedworth Borough Council

Item No.	Title

40. Apologies for Absence

Apologies for absence were received from Councillor Fitzgerald (Cannock Chase District Council) Councillor Gakhal (City of Wolverhampton Council), Jo Nugent (Homes England) and Dawn Ward (Greater Birmingham & Solihull LEP).

41. Nomination of substitutes

Councillor Simkins (City of Wolverhampton) participated in the meeting via MS Teams on behalf of Councillor Gakhal.

42. Minutes -19 January 2022

Resolved: That the minutes of the meeting held on 19 January 2022 be approved as a correct record.

43. Affordable Housing Delivery with Housing Associations : Progress Update

The board considered a report of the Director of Housing and Regeneration that provided an update and clear direction of travel on the ongoing work of the WMCA and housing association partners to establish a more comprehensive collective approach to the delivery of affordable housing across the region - a key deliverable for the Housing and Land Delivery Board in 2022/23.

The report also sought endorsement for the work underway to develop an innovative pilot approach with a small group of Housing Associations based on packaged land disposal. It was noted that affordable housing was part of the set of deliverables for the Housing and Land Delivery Board.

A report outlining the WMCA definition of affordable housing (currently under review) which was endorsed by this board in January 2020 was circulated with the papers for information.

Councillor Mackiewicz considered the affordable housing definition was difficult to determine from the documents circulated and asked for it to be made clearer if possible. He also advised that Solihull Officers thought the Help to Own Scheme does not meet certain national affordability criteria and would like WMCA Officers to check this.

The Director of Housing and Regeneration, Gareth Bradford reported that he understood the Help to Own Scheme in Wolverhampton meets the WMCA definition of affordable and the definition in the National Planning Policy Framework but would check on this and confirm the position with the board.

The board received a presentation from the Strategic Planning Manager, Rob Lamond that provided an update on work being undertaken to update the affordable housing definition for the WMCA, progress made with housing associations on affordable housing delivery, the objectives of the pilot package and next steps.

Councillor Simkins reported that Wolverhampton has established a housing forum and would like the Combined Authority to work with the forum. He considered that the WMCA should work with ALMOs/local authorities to improve housing and make it affordable so as to allow people to remain in their local area, noting that Birmingham City Council has the biggest local authority housing stock in the country.

Gareth Bradford reported that the WMCA was engaging with Wolverhampton Living in Wolverhampton, Birmingham Municipal Housing Trust amongst other organisations and some non-constituent authorities. Rob Lamond advised that he would look to analyse the National Planning Policy Framework and WMCA's affordable housing definitions in terms of the extent to which they supported the wishes of people wishing to stay within their locality.

In relation to the proposed pilot package, Councillor Welsh enquired whether the sites for affordable housing have already been determined as he noted

the report referred to new homes being located adjacent to a Metro station and a new hospital which did not apply to Coventry. He asked that officers be open and transparent with regards to any sites identified.

The Chair reported that, to avoid commercial prejudice, the preferred sites could be identified, if and when they were in public control as opposed to being available on the open market. It was agreed that a future report should set out why WMCA should progress affordable housing delivery in this way.

The Director of Housing and Regeneration advised that, whilst a number of sites have been considered for the pilot approach, the preferred sites have not yet been confirmed: the report set out criteria which were based on a couple of potential sites but the criteria are being reviewed and the final version will be used to determine the preferred sites.

Councillor Welsh confirmed he was satisfied with this approach and asked for the revised criteria be re-submitted to the board.

Councillor Mackiewicz asked that consideration be given to establishing a clear definition of key workers with regards to housing support and noted the WMCA needs to press on with Net Zero given the current situation with Russia and Ukraine.

The Chair concurred with the need for a definition of affordable housing and stated that the definition of 'key workers' should not be too narrow or prescriptive e.g. it should not be restricted to NHS workers. The definition should also consider what is genuinely affordable in cost terms and the potential benefits of schemes such as Help to Own which does not require a deposit.

The Director of Housing and Regeneration reported that it is up to each local authority to determine its definition of key workers, but he was happy for the WMCA to look at setting the principles for its own definition, to be applied on development projects where WMCA support was requested.

The board discussed the role of council housing in affordable housing and the need for local authorities to be provided with funding to enable them to renew their housing stock. It was noted that, as housing stock ages, the associated maintenance costs increase. There is a need for a review of older stock, retaining dwellings which provide viable, good quality accommodation and considering estate renewal elsewhere. WMCA also needs to work closely with Housing Departments in local authorities to maximise the opportunities for affordable housing, bringing forward more opportunities, particularly on brownfield land.

The Director of Housing and Regeneration advised that, historically, government funding has been available only for new homes not replacement homes. As a result, at present, the number of dwellings secured by estate renewal is not an output accepted by Government although he was hoping that the Levelling Up Fund would offer some additional flexibility, including support for wider place making. He added that a new officer group had been set up with regards to Levelling Up and this could look at estate renewal.

Kevin Rogers stated that the aim is to provide as many affordable homes as possible, maximising the West Midlands share of national funding administered by Homes England. Consideration also needs to be given by local planning authorities to the mix of dwellings and to the impact of viability considerations in relation to affordable housing provision as required by the National Planning Policy Framework.

In relation to the viability requirements of the National Planning Policy Framework, the Director of Housing and Regeneration advised that he would look to put together some points on this issue for the next meeting. It was recognised that the delivery of affordable housing is strongly influenced by land values and that a long term strategy to deal with this is required. If affordable housing requirements are factored in at an early stage, it increases the potential to secure a higher percentage of affordable homes. In the meantime, WMCA will continue with its requirement for a minimum of 20% affordable to be provided on all schemes supported by WMCA and the mix of dwellings on each site will be agreed with local planning authorities. The Public Land Charter also requires affordable housing to be factored into any disposals.

The Director of Housing and Regeneration advised that an officer group encompassing WMCA, local authorities and housing associations is being set up to progress matters relating to affordable housing, including those raised in the meeting. Members were asked to nominate an officer to the group.

Resolved:

1. The positive progress with the work taking place under the Housing and Land Delivery Board to improve the collaboration and co-investment in the region between housing associations and the WMCA to secure more social and affordable housing to meet local needs be welcomed and endorsed;

2. This collaboration is part of a broad package of affordable housing measures and initiatives being progressed under the Housing and Land Portfolio be noted and

3. The specific work taking place on the new innovative joint approach with a group of housing associations in the region to deliver additional affordable housing and wider socio-economic outcomes on WMCA land be welcomed and endorsed.

44. WMCA Housing & Land Devolved Funds : Progress Update

The board considered a report of the Director of Housing and Regeneration that provided an update on the funding which the WMCA has secured to date from Government on the housing and regeneration matters which it administers via the Single Commissioning Framework across the West Midlands. The report also provides an update on ongoing discussions with Government to secure further housing and regeneration funding for the region.

The Strategic Planning Manager, Rob Lamond reported that the WMCA has secured a further £28m from the Brownfield Housing Fund that was included in the Levelling Up announcements, the largest of any Mayoral Combined Authority. Additionally, the WMCA has also secured a further £17.4m through direct negotiations with Government to be administered through the Single Commissioning Framework. He advised that there were also further opportunities to deliver more housing and infrastructure for the region through the Levelling Up agenda.

In relation to an enquiry from Councillor Simkins regarding intervention rates that are prohibitive due to economic viability and whether these could these could be flexed going forward, the Director of Housing and Regeneration advised that the WMCA does not impose intervention rates on schemes but specifies what is needed to deliver the housing outputs based on Government requirements/targets. He added that it was cheaper to deliver housing on less contaminated land but the programme could flex according to needs and reminded the board that the outputs on every scheme are specified in the Quarterly Report on Housing and Land Portfolio Deliverables.

Councillor Welsh reported that Coventry was in the process of identifying its brownfield sites and was looking forward to working with the WMCA on how these could be utilised.

The Director of Housing and Regeneration, Gareth Bradford invited local authority colleagues to contact him or Rob Lamond to discuss how the WMCA could assist with regards to taking forward brownfield and or other potential sites or would like further information presented to Cabinet or Chief Executive meetings.

Resolved:

1. The success of the WMCA Housing and Land Portfolio in securing devolved housing and land funds from Government and the strong performance to date against targets set out in these funds be welcomed and endorsed and

2. The business case work being undertaken by the WMCA Housing and Land Portfolio to secure further funding from Government to support the objectives set by the Housing and Land Delivery Board including jobs, commercial development and brownfield land remediation and innovative new proposals like modular construction and zero carbon homes be noted and endorsed.

45. Housing & Land Portfolio Deliverables 2022/23 : Update Report

The board considered a report of the Director of Housing and Regeneration that sought endorsement of the draft Housing and Land Portfolio Deliverables prior to approval by the WMCA Board on 18 March 2022. The deliverables would directly support the implementation of the WMCA's Strategic Aims and Objectives approved by the WMCA Board in November 2021.

The board discussed the role of Advanced Manufacturing in Construction

(AMC), in particular, the role of modular housing in delivering cheaper and more energy efficient homes and the need to attract AMC manufacturers to the region.

The Director of Housing and Regeneration proposed a site visit be arranged to look at how the WMCA has helped support the delivery of AMC, Net Zero and affordable homes in the region (including Help to Own) if members were interested in this.

The Chair reported that he would like the above visit to be arranged for board members and for it to be scheduled during the summer. He indicated that he would like to know the location of AMC manufacturing sites as he would like to encourage businesses to come to the West Midlands.

The Director of Housing and Regeneration advised that he would ask AMC Officers/AMC Taskforce to look at how the WMCA could support the AMC industry with regards to WMCA land/infrastructure loans and would submit a report to the next meeting on the matter.

Resolved: The Housing and Land Portfolio High Level Deliverables for 2022/23 be endorsed prior to the approval by the WMCA Board on 18 March 2022.

46. Date of next meeting - 27 April 2022 at 10.00am

The meeting ended at 11.25 am.

West Midlands Combined Authority

Housing & Land Delivery Board

Date	27th April 2022
Report title	Quarterly Report on Housing & Land Portfolio Deliverables and Progress on Housing & Land Annual Business Plan
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration Rob Lamond, Strategic Planning Manager (report author)
Previous reports	Quarterly monitoring and performance reports have been considered since 2018 by both the Housing & Land Delivery Board and Delivery Steering Group

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is recommended to:

a) **Note the positive progress** to achieve the **Housing & Land portfolio's approved Annual Deliverables in 2021/2022** and the clear plans in place for progressing the agreed High Level Deliverables work programmes during the remainder of 2022;

b) **Note** the key performance highlights set out in Section 3.0;

c) **Note the positive performance and effective deployment of WMCA's Devolved Housing and Land funds**, illustrated by the Single Commissioning Framework schemes summarised in Annex 1 to this report. Many of these schemes are now in **delivery phase** having progressed through the end to end SCF process which shows the role of WMCA in unlocking, accelerating and problem solving on 'difficult to deliver' schemes.

1.0 Purpose

1.1 The purpose of this paper is to **provide our regular quarterly update** on progress thus far and next steps in delivering the High Level Deliverables for the Housing and Land Portfolio as co-developed with the Housing & Land Delivery Board throughout 2021/22 and agreed by WMCA Board in February 2021. As with previous years, the portfolio's annual deliverables were co-developed with local authorities, industry taskforces and other partners in the region. They are fully informed by, and aligned with, the Housing & Land Recovery Strategy (approved by the Housing & Land Delivery Board in September 2020), the WMCA Business Plan and the regional "Recharge" document from Summer 2020.

1.2 **To date in 2021/22, considerable progress has been made against each of these deliverables. This report provides a summary of the current position and highlights particularly notable progress.**

1.3 The end of year report for Housing & Land deliverables 2021/22 will be provided to the next round of DSG and H&LDB meetings.

2.0 Background

2.1 As part of the formal process to determine the WMCA's budget, levy and precept levels, the WMCA Board approves each portfolio's annual deliverables. The Deliverables for the Housing and Land Portfolio were presented in draft at the WMCA Board of 15th January 2021 and agreed by the WMCA Board on 12th February 2021.

2.2 The table below sets out each of the approved Housing and Land High Level Deliverables alongside a summary of progress to date and, where appropriate, information on next steps.

2.3 In response to feedback from the Delivery Steering Group and the Housing & Land Delivery Board, and to provide both forums with an update on the delivery of the first High Level Deliverable in the table ("Deliver our nationally leading brownfield regeneration and housing delivery programmes"), the appended document (included under the private section of the agenda) provides a synopsis of the schemes which have been approved for investment to date or which are seeking approval through the Single Commissioning Framework to date. Due to commercial confidentiality we are unable to provide exact details of schemes which are yet to be approved.

3.0 Key Highlights Since Last Quarterly Report

3.1 Since the last quarterly report significant progress has been made on several of the High Level Deliverables (HLDs). The summary table in section 4.0 gives an update against each HLD, whilst **this section is intended to highlight particularly notable advancements that have been made.**

3.2 **Delivery of our nationally leading brownfield regeneration and housing delivery programmes** has progressed well since the last quarterly update, with several schemes moving towards approval at Investment Board since the last Board meeting. A significant number of further schemes are timetabled for decision at Investment Board in Quarter 4 of 2021/22 and Quarter 1 2022/23 (see Annex 1 for more detail) to unlock hundreds of new homes and jobs and secure £millions of investment in the region.

3.3 The WMCA has secured further additional funding from HM Government's Brownfield Housing Funds, with a further £28m allocation to the West Midlands as part of the Levelling Up White Paper announcements alongside an additional £17.4m secured by WMCA through direct negotiations with the Department for Levelling Up, Housing & Communities. This means that the WMCA has now secured a total of £153.4m from the Brownfield Housing Fund for deployment via the Single Commissioning Framework.

3.4 The West Midlands Investment Prospectus 2022 was launched by the Mayor of the West Midlands at MIPIM on 16th March 2022. The prospectus included over £15bn worth of housing, regeneration, commercial and infrastructure development opportunities such as:

- Birmingham Curzon HS2: major investment opportunities around the new HS2 station include commercial, residential, leisure, energy, and education development.

- UK Central Solihull: significant opportunities around the HS2 Interchange Station at Arden Cross, across the UK Central Hub, and broader Solihull, with investment in commercial, residential, leisure and energy sectors

- Key regional growth corridors and hubs: developments guided by the Perry Barr 2040: Vision for Legacy masterplan; Phase 3 of the landmark Paradise Development in Birmingham City Centre; and a new opportunity area linking Coventry and Warwickshire.

- Urban centres and strategic sites: regeneration schemes including Nuneaton town centre redevelopment; the 125-hectare West Midlands Gigafactory site at Coventry Airport; the South Site of automotive innovation cluster MIRA Technology Park; and a significant residential and commercial development on the site of the former MG Rover car plant at Longbridge.

The West Midlands Combined Authority (WMCA) used its presence at MIPIM to engage with international investors, putting the region on the global stage, and highlighted the best opportunities for investment across all property and regeneration sectors.

4.0 Progress and current activity: summary table

High Level Deliverable	Q4 Update
Deliver our nationally leading brownfield regeneration and housing delivery programmes to achieve the prescribed KPIs and Output Requirements set by HMG and WMCA Board	This is an ongoing extensive programme of investments, interventions and disposals under the Single Commissioning Framework. During 2021 numerous multi-million pound schemes have been progressed all the way through the end to end journey and an increasing number of projects are now on site or in the delivery phase. A strong pipeline of schemes is continuing through due diligence processes ahead of Investment Board decisions in early 2022 (see appended document), in addition to those already approved via Investment Board in previous quarters. There is a good pipeline of new projects coming through and extensive engagement with industry and local authorities to leverage

	private sector investment and maximise existing public investment. Delivery of the Housing Deal Land Fund programme remains ahead of trajectory to exceed the delivery target of 8,000 new homes and the programme for the new Brownfield Housing Fund (BHF) and National Competitive Fund (NCF) forecasts them performing ahead of schedule too. Tranche 2 of the funding from BHF and NCF have been received from HM Government in recognition of the region's performance and continued delivery record of brownfield regeneration.
Ensure delivery of the requirements of the 2018 Housing Deal and lead performance reporting to Government	Local Plan monitoring is a requirement of the Housing Deal and the Housing & Regeneration team reports on a monthly basis to the Department of Levelling up, Homes and Communities (DLUHC) and supports local authorities with local plan progress and evidence. This informs the dialogue held with DLUHC on a monthly basis, the submission of business cases and the quarterly reports included in Land Fund monitoring arrangements. Regular performance updates on the delivery of the Brownfield Housing Fund (£84m) and National Competitive Fund (£24m) are also now programmed on a quarterly basis with DLUHC alongside meetings with key civil servants, in line with the successful approach taken during the Land Fund monitoring.
Effectively develop, collaborate and submit compelling business cases for additional funding from HMG to deliver WMCA approved priorities	Following the Budget and Spending Review announcements made by HM Government in Autumn 2021 regarding the £1.8bn funding to be made available for brownfield regeneration across England, WMCA have been in frequent dialogue with DLUHC officials to co-develop proposals for further funding for the region. In parallel, the "Trailblazer Devolution Deal" discussions ongoing with HM Government and WMCA include opportunities for the region to seek further support and funding to secure regional priorities.
Implement the approved Housing & Land Board Covid19 Recovery Strategy and Pipeline Development	The Housing & Land Board's approved Recovery Plan (September 2020) continues to inform all the deliverables in this report and the work of the WMCA Housing & Regeneration Team, including the work on business cases for HMG, the approaches to Public Land and Employment land, and the development and implementation of town centre strategy. The project pipeline developed as part of the Covid-19 Recovery Strategy is constantly updated and reviewed with local partners at our regular 6-weekly engagement meetings and informs funding schedules and project identification for the SCF. Business cases to HMG and inclusions are reviewed on a regular basis with local partners through an extensive suite of bilateral conversations.

Establish new partnerships and joint ventures and delivery vehicles	Work is ongoing with housing association partners to establish a new partnership approach for affordable housing delivery. An update was presented to and endorsed by the Housing & Land Delivery Board at its meeting in January 2022 and subsequently by the WMCA Overview & Scrutiny Committee. Negotiations are ongoing with several developers and investors to establish further Strategic Partnerships alongside those already in place with Lovell, Urban Splash and St Modwen, including the final stages of MoU development with a new partner. Discussions are ongoing with public and private sector partners to create new joint ventures and delivery vehicles building on current joint ventures, like Help to Own and Friar Park JV.
Create strong investor engagement and developer relationships, working alongside West Midlands Growth Company	The West Midlands Investment Prospectus was launched at MIPIM on 16th March 2022, highlighting 20+ strategically significant schemes in the region totalling over £15bn of opportunities. This project was delivered with support from WMGC and co-developed with local authorities, LEPs and industry partners to attract investment to the region and provides the centrepiece for the region's investor engagement in the coming year. WMCA convenes the Commercial Property Taskforce on a quarterly basis. Feedback and engagement with this forum has informed the further funding proposals to Government and creation of investible propositions.
Develop and collaborate on identified policy development work that supports delivery of the Housing & Land Delivery Board's KPIs and the Recovery Strategy	WMCA maintains frequent engagement with DLUHC & Whitehall more broadly on emerging policy issues and priorities, including employment land, Advanced Manufacturing in Construction (AMC) and affordable homes. Our industry led taskforces (e.g. town centres, commercial property, AMC, public land) act as critical friends and sounding boards for policy development. Working groups of the Delivery Steering Group on specific policy areas (e.g. Employment Land, Town Centres, AMC, Public Land) have been established with local authority representation. The Housing & Regeneration team is working closely with colleagues in TfWM to address shared priorities and establish joint approaches to investment in the region.

Town Centre Regeneration	WMCA investment in town centre schemes continues to progress via the Single Commissioning Framework (see appended document for specific examples). The Regional Town Centre Taskforce is working closely to support Local Authority colleagues in Stratford, Warwickshire and Telford on specific areas of interest and potential scheme development.
Advanced Manufacturing in Construction (AMC)	An AMC business case proposal arising from announcements in the Budget 2021 is the subject of ongoing discussions with HMG. The £50m ask of Government was included in the region's 2020 "Recharge" document. Negotiations and engagement with developers and investors looking to establish new AMC facilities in the region are continuing. There is a separate item on this subject on today's agenda.
Zero Carbon Homes	The ZCH routemap has been completed and approved.
Affordable Housing	The business case for the Affordable Housing Delivery Partnership with registered providers is progressing towards Investment Board decision in 2022 following endorsement by H&LDB of the progress made thus far. The "Help to Own" scheme in Wolverhampton, which was brought forward by joint investment from WMCA and City of Wolverhampton Council, welcomed its first tenants in September 2021 and is subject to high customer demand. Evaluation work is ongoing to assess the opportunities to roll out Help To Own with potential for WMCA support on further sites in the region to be decided in due course.
Regional One Public Estate Programme	Submission of the West Midlands OPE Partnership's proposals for OPE9 was completed in November 2021 and is now under consideration by the Cabinet Office and Local Government Association. Existing programmes for OPE6 & OPE7 continue to be managed and evaluated by the WM OPE Board.
Public Land Taskforce	The Public Land Taskforce's existing mandate has been extended for six months until June 2022. The Taskforce's top priority remains the Public Land Charter which is scheduled for launch in May 2022. Following its launch, the intention is for members of the Public Land Taskforce to take the document through their organisations' respective governance processes for endorsement. The Taskforce is also going to take a key role in providing support and challenge on new bids and proposals being drafted by the WMCA.

5.0 Conclusions

5.1 The updates set out above, and the appended SCF schemes quarterly update, illustrate that the WMCA and local authority partners are making considerable progress and added value together in achieving the Housing and Land Portfolio Deliverables for 2021/22. Further reports will be provided to Housing and Land Board on a quarterly basis throughout the 2022/23 financial year.

6.0 Financial Implications

6.1 There are no un-budgeted financial implications as a result of the recommendations within this report. The majority of the work to achieve the Deliverables will be undertaken through in-house resource and any external support requirement will be funded from existing Housing & Regeneration budget.

6.2 Any WMCA investment to meet the Housing and Land Portfolio Deliverables will be governed and administered through the WMCA Single Assurance Framework and in line with the accounting and taxation policies of the WMCA and HMRC

7.0 Legal Implications

7.1 Section 10.1 and schedule 3 of The West Midlands Combined Authority Order 2016 No. 653 (the Order) confers economic development and regeneration functions to the WMCA in the Combined Authority area. Schedule 3 sets out a duty under section 69 of the 2009 Act for the Combined Authority to prepare an assessment of economic conditions.

7.2 By virtue of section 113A of The Local Democracy, Economic Development and Construction Act 2009 as amended by section 13 The Localism Act 2011 the WMCA may do anything it considers appropriate for the purposes of the carrying-out of any of its functions.

7.3 Section 22 (i) of the West Midlands Combined Authority (Functions and Amendment) Order 2017 expressly states that the power to pay grant is a function exercisable only by the Mayor with Section 22 (2) requiring the Mayor to seek the assistance of members and officers in the exercise of this function.

7.4 There are no direct legal implications identified as a result of this report. However, the proposals set out in this report will have legal implications and risks in the future which will be considered at the appropriate time through future reports as necessary.

8.0 Equalities Implications

8.1 There are no immediate equalities implications in relation to this report. However, individual strategies and delivery schemes will need to take into account local area needs and local stakeholder needs to ensure the schemes benefit local residents, including harder to reach groups. To that effect equality impact assessments will need to be conducted to understand demographics, key inequality issues and how investment can help address key inequality gaps. Engagement and consultation with key equality stakeholders is also crucial.

9.0 Inclusive Growth Implications

9.1 The High level Deliverables have been developed in close consideration of Inclusive Growth principles and are themselves neutral when it comes to inclusive growth. However, implications will arise as investments are made and strategies are devised – in terms of who benefits from those investments and in who is involved in shaping and contributing to them. As such, any programmes should be devised with the responsibility to deliver inclusive growth.

10.0 Geographical Area of Report's Implications

10.1 The recommendations of this report apply to the whole of the WMCA area.

11.0 Other implications

11.1 None.

12.0. Schedule of Background Papers

12.1 None.

West Midlands Combined Authority

Housing & Land Delivery Board

Date	27th April 2022
Report title	Trailblazer Devolution Deal: Discussion paper
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration Rob Lamond, Strategic Planning Manager (report author)
Previous reports	• April 2022: Housing & Land Delivery Steering Group

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is recommended to:

a) **Note** the positive announcements made as part of the Levelling Up White Paper regarding additional funding for Brownfield Regeneration to be deployed by WMCA via the Single Commissioning Framework in the West Midlands;

b) **Note** the potential for further devolution to the region from national government, with the West Midlands and Greater Manchester being the only two areas specifically identified for "Trailblazer Devolution Deals" in the White Paper;

c) **Discuss** the possible Housing, Regeneration and Land proposals that the Board would like to be considered for inclusion in a future Trailblazer Devolution Deal between WMCA and HM Government; specifically reflecting the key areas of focus for the Housing & Land Delivery Board, including regeneration, public land, affordable housing, town centres etc.

d) **Endorse** the formation of a "task and finish" officer sub-group of Housing & Land Delivery Steering Group to inform and develop the proposals.

1.0 Purpose

1.1 The purpose of this paper is to provide the Housing & Land Delivery Board with an update on the implications of the Levelling Up White Paper published by HM

Government in February 2022, and to inform discussion at this and future meetings of Delivery Steering Group and Housing & Land Delivery Board regarding potential devolution proposals for discussion between WMCA and the Department for Levelling Up, Housing and Communities (DLUHC) during the Summer of 2022.

1.2 The discussion and outcomes of this agenda item will inform the development of the region's response to Government as part of the Trailblazer Devolution Deal process.

2.0 Background

2.1 The Levelling Up White Paper (LUWP) was published on 2 February 2022. The paper defined 'levelling up' as:

- increasing opportunity across the UK;
- reducing disparities between and within regions.

2.2 The LUWP also announced a number of policy initiatives for the West Midlands, including a further allocation of £28m from the Brownfield Housing Fund to be deployed by WMCA, and the identification of Wolverhampton as one of the first two (along with Sheffield) of twenty places identified in England for transformational regeneration support from Government.

2.3 The LUWP sets out 12 levelling up 'missions' and makes the case for long-term 'system change' involving more effective spatial considerations in policy-making and further devolution to empower local decision-making. These missions of levelling up, to be achieved by 2030, are set out in Appendix 1 to this paper.

2.4 In addition to these announcements, the LUWP proposes deepening devolution across the UK, offering a number of devolved powers to regions which want them. The offer for the West Midlands goes even further. Alongside Greater Manchester Combined Authority, **WMCA has been invited to negotiate a Trailblazer Devolution Deal (TDD) which goes beyond what is on offer to the rest of the country.** The West Midlands has the opportunity to seek ambitious changes to increase the powers and resources devolved to us, strengthening our region and providing opportunities for future success.

2.5 This represents a significant opportunity for our region to secure new powers and resources in order to drive forward local and regional priorities to bolster economic recovery and build a fairer, greener, healthier West Midlands. Through direct engagement with the Department for Levelling Up Housing and Communities, WMCA has been encouraged to consider options for further devolution relating to areas such as regeneration, public land, town centres, affordable housing, Advanced Manufacturing in Construction, etc. – all areas covered by the remit of the Housing & Land Delivery Board.

3.0 Developing proposals

3.1 Since the publication of the LUWP, WMCA has been engaging key partners and stakeholders across the region on potential opportunities to be included in the Trailblazer Devolution Deal.

3.2 The WMCA Housing & Regeneration team is currently engaging directly with local authority colleagues, public and private sector organisations and our industry-led taskforces to understand the opportunities, barriers and possibilities that a further devolution deal could unlock for the region and for each partner organisation. This is a comprehensive and wide-ranging work programme throughout the Summer/ Autumn 2022, including engagement with Housing & Land Delivery Steering Group at their meeting in April 2022 and subsequent formation of a Trailblazer Devolution Deal "task and finish" sub-group of the Delivery Steering Group to shape proposals.

3.3 A list of possible areas co-developed with Delivery Steering Group and discussed at its meeting in April 2022 for further exploration, consideration and discussion is included below under section 4 to guide to inform the discussion at Housing & Land Delivery Board. This is not an exhaustive or comprehensive set of options and is set out as a **prompt only** for further discussion in the meeting and for further dialogue.

4.0 Suggestions for further discussion co-developed with Delivery Steering Group

4.1 As stated above, the list below developed with Delivery Steering Group is **intended only as a guide for discussion by the Housing & Land Delivery Board**, to inform the development of WMCA proposals for a Trailblazer Devolution Deal on elements that Board is responsible for. We welcome soundings on these areas and further possibilities that may be proposed by members of the Board for inclusion.

Areas for exploration: powers, freedoms and funding
Land assembly/acquisition/disposal powers to co-ordinate strategic investment propositions and address barriers to delivery
Flexibilities to establish delivery vehicles and appropriate joint ventures and partnerships to accelerate delivery
Regional guidance or similar allowing more localised solutions than national policy – especially on issues such viability, affordability, zero carbon, AMC, etc. based on assessed on local needs
Regional Infrastructure Planning Charter including Utilities Infrastructure requirements aligned with Local Plans
Greater revenue and capacity funding alongside capital programmes to support regeneration
Regional academy for property and construction professions to drive skills supply and future cohorts needed in the region

Public land including new powers/options over land owned/controlled by Government departments in the region and considerations of “best value” in line with the Public Land Charter
Zero Carbon Homes and retrofitting of existing stock and commercial property
Leading AMC and Future Homes Standard implementation ahead of national guidance
Levelling Up Regeneration Fund – supporting mixed-use, commercial and residential projects to deliver genuine placemaking and regeneration (including estate renewal) and a more flexible approach
Levelling Up Corridor Zones/Town Centre Investment Zones and similar models, with regional accountability and sign off rather than national prescription and sign off
Powers/freedoms equivalent to, and beyond, other Mayoral Combined Authorities (e.g. Private Rented Sector quality and standards)
Further items as proposed by Housing & Land Delivery Board

5.0 Next steps

5.1 Following discussion and soundings at Housing & Land Delivery Board regarding the areas for inclusion and options for consideration, and further development of proposals by the devolution task and finish group of Delivery Steering Group, the feedback and input from the Board will be incorporated into the WMCA’s overall Trailblazer Devolution Deal process and a further paper to inform discussion at the next Housing & Land Delivery Board meeting in July 2022.

6.0 Financial Implications

6.1 There are no direct financial implications as a result of the recommendations within this paper. There will be, in future, financial implications associated with securing and deploying future funding as a result of the Devolution paper, which will be funded from existing Housing and Regeneration budgets.

6.2 Any WMCA investment into the Devolution agenda would be governed and administered through the WMCA Single Assurance Framework and in line with the accounting and taxation policies of the WMCA and HMRC

7.0 Legal Implications

7.1 Section 113A(1)(a) of the Local Democracy, Economic Development and Construction Act 2009 gives the CA a power of competence appropriate for the purposes of carrying-out any of its functions. Part 4 of The West Midlands Combined Authority Order 2016 (2016 No 653) confers that the functions relating to any Economic development and regeneration in the constituent councils are exercisable by the CA. Part 3 of The West Midlands Combined Authority (Functions and Amendment) Order 2017 confers the functions corresponding to the

functions of the Housing Community Agency (now Homes England) has in relation to the combined area.

7.2 It is noted that the purpose of this paper is to provide updates on the implications of the Levelling Up White Paper published by HM Government in February 2022, and to inform discussion at the meeting regarding the potential proposals for negotiation between WMCA and the Department for Levelling Up, Housing and Communities. Legal advice may be required going forward in relation to any new powers being sought by WMCA and to support the negotiations with the Government in regard to the Devolution Deal. This will/should be sought as and when required.

8.0 Equalities Implications

8.1 Equalities matters lie at the heart of the Government's levelling up agenda and the Housing & Land Delivery Board is asked to consider how best these might be addressed in the Trailblazer Devolution Deal that is being prepared by WMCA over coming months.

9.0 Inclusive Growth Implications

9.1 The Government's Levelling Up White Paper defines 'levelling up' in terms of increasing opportunity across the UK and reducing disparities between and within regions. Both matters present significant opportunities for inclusive growth and the Housing & Land Delivery Board is asked to consider how best these might be addressed in the Trailblazer Devolution Deal that is being prepared by WMCA over the coming months.

10.0 Geographical Area of Report's Implications

10.1 The recommendations of this report apply to the whole of the WMCA area.

11.0 Other implications

11.1 None.

12.0. Schedule of Background Papers

12.1 None.

Appendix 1: Levelling Up White Paper - Missions

- By 2030, pay, employment and productivity will have risen in every area of the UK, with each containing a globally competitive city, with the gap between the top performing and other areas closing.

- By 2030, domestic public investment in Research & Development outside the Greater South East will increase by at least 40% and at least one third over the Spending Review period, with that additional government funding seeking to leverage at least twice as much private sector investment over the long term to stimulate innovation and productivity growth.

- By 2030, local public transport connectivity across the country will be significantly closer to the standards of London, with improved services, simpler fares and integrated ticketing.

- By 2030, the UK will have nationwide gigabit-capable broadband and 4G coverage, with 5G coverage for the majority of the population.

- By 2030, the number of primary school children achieving the expected standard in reading, writing and maths will have significantly increased. In England, this will mean 90% of children will achieve the expected standard, and the percentage of children meeting the expected standard in the worst performing areas will have increased by over a third.

- By 2030, the number of people successfully completing high-quality skills training will have significantly increased in every area of the UK. In England, this will lead to 200,000 more people successfully completing high-quality skills training annually, driven by 80,000 more people completing courses in the lowest skilled areas.

- By 2030, the gap in Healthy Life Expectancy (HLE) between local areas where it is highest and lowest will have narrowed, and by 2035 HLE will rise by 5 years.

- By 2030, well-being will have improved in every area of the UK, with the gap between top performing and other areas closing.

- By 2030, pride in place, such as people's satisfaction with their town centre and engagement in local culture and community, will have risen in every area of the UK, with the gap between the top performing and other areas closing.

- By 2030, renters will have a secure path to ownership with the number of first-time buyers increasing in all areas; and the government's ambition is for the number of non-decent rented homes to have fallen by 50%, with the biggest improvements in the lowest performing areas.

- By 2030, homicide, serious violence, and neighbourhood crime will have fallen, focused on the worst-affected areas.

- By 2030, every part of England that wants one will have a devolution deal with powers at or approaching the highest level of devolution and a simplified, long-term funding settlement.

Sourced from https://www.gov.uk/government/publications/levelling-up-the-united-kingdom

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West Midlands Combined Authority

Housing & Land Delivery Board

Date	27th April 2022
Report title	Advanced Manufacturing in Construction (AMC): Enabling Infrastructure for delivery of AMC in the West Midlands
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration Rob Lamond, Strategic Planning Manager (report author)
Previous reports	• April 2022: Housing & Land Delivery Steering Group presentation

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is recommended to:

a) **Note** the background regarding the WMCA's work to date with partners to develop the AMC Charter and Routemap (approved by the Housing & Land Delivery Board in November 2020); and

b) **Discuss and endorse** the proposed next steps for work led by WMCA around AMC and the Future Homes Standard in the region, as set out in Section 4.2 of this report, to establish the West Midlands as a national leader for this agenda.

1.0 Purpose

1.1 The purpose of this paper is to provide the Housing & Land Delivery Board with an update on the regional picture for Advanced Manufacturing in Construction (AMC) and to highlight the scale of opportunity for the West Midlands, potentially to be the vanguard for this agenda across the UK.

1.2 This paper follows a discussion at the meeting of the Housing & Land Delivery Board in March 2022 in which members noted the role of AMC in delivering cheaper and more energy efficient homes and the need to attract AMC manufacturers to the

region in order to leverage wider outcomes including productivity, pace of delivery and carbon savings.

2.0 Background

2.1 WMCA's AMC work programme and its outputs were identified as a key Housing and Land Portfolio Deliverable for 2021/22 and also as a key component of the region's post Covid19 Plan and "Recharge" strategy, Investment Prospectus and Plan for Growth. WMCA's Corporate Aims for 2022/23 include "*To reduce carbon emissions to net zero, enhance the environment and boost climate resilience*", with an agreed objective for the Housing and Land Portfolio that "*We will be national pioneers in advanced manufacturing in construction, zero carbon housing and brownfield regeneration and delivery, informed by research at the National Brownfield Institute*". This being the case, AMC sits front and central to the work of WMCA's Housing & Land Delivery Board.

2.2 WMCA's AMC Expert Advisory Group, chaired by Mark Farmer (UK Government's Champion of AMC in housebuilding) was established in April 2020. Its members include private sector developers and suppliers, academia, innovation, industry bodies and finance across regional and national businesses and institutions. To date, the Advisory Group has provided expert insight into the future of construction and advanced manufacturing, informing the direction of Advanced Manufacturing within the region and synergies with work further afield, alongside acting as a critical friend throughout the development of the AMC routemap and programme.

2.3 The AMC work programme overseen by WMCA's Housing & Land Delivery Board was outlined in the AMC Routemap agreed by the Housing & Land Delivery Board in November 2020. The primary purpose of the Routemap is to set out how AMC delivers not only significant new homes and jobs but also social value, inclusive growth and environmental benefits central to delivery of other programmes such as brownfield regeneration, and zero carbon homes in the region.

2.4 In parallel with the development of the Routemap, an investment case for an AMC Acceleration Fund was prepared by WMCA officials in partnership with the AMC Taskforce and a working group of local authority officers. This funding was intended to increase the uptake of AMC in the region by bridging the gap between the cost of AMC versus traditional methods of construction and providing the certainty business needs to invest and develop in new technologies and training in the region. To date, this additional funding has yet to be secured and is part of wider negotiations of WMCA with Government on a Levelling Up Regeneration Fund.

2.5 In line with the Single Commissioning Framework's (SCF) requirements for investment, WMCA seeks demonstrable commitment to AMC in all housing and land schemes funded through the SCF devolved Housing and Land Funds.

3.0 AMC Routemap and the wider context

3.1 The WMCA AMC Routemap was approved by Housing & Land Delivery Board in November 2020 (see Annex 1 to this report). The document set out the challenges for the construction sector, the opportunities for AMC in the West Midlands, and the key data related to the sector (accurate at the time of publication).

3.2 The Routemap set out how increasing the region's delivery of AMC developments could support a number of the region's wider housing, land and regeneration objectives including:

- Accelerating housing delivery
- Investing in the region and inclusive growth
- Delivering a zero carbon future, and
- Design that reflects the character, context, and aspirations of our communities.

3.3 The region's existing AMC expertise, and potential to seize the opportunity to become a national and international leader in new construction techniques, is identified in the Routemap which notes that there is a noticeable concentration of related businesses in the West Midlands alongside nine "Tier 1" AMC manufacturers based in the region.

3.4 Furthermore, within the context of the Government's **Levelling Up** agenda (as per the White Paper published in February 2022) it is important to note the further wider outcomes that could be unlocked through more investment and delivery of AMC, such as:

- Increased productivity
- Research and development investment
- New high-tech skills development and workforce growth in new industries

- Supply chain developments and agglomeration of high-growth businesses
- New training, curricula and innovation hubs
- Private sector investment and leverage
- Innovation in the construction industry.

3.5 Additionally, since the date of the Routemap's publication, several **structural economic changes** have occurred that have had significant effects on the construction sector. For example, supply issues and increased costs of materials[1], a tightened labour market leading to higher wages and shortages of skilled workers, and global logistics issues have all combined to exacerbate issues with traditional construction methods.

3.6 These changes, alongside shifts in market demand following the Covid-19 pandemic towards homes with dedicated workspace provision and more living space, increasing energy costs, and the move towards reduced carbon construction

Future Homes Standard

In the 2019 Spring Statement, the Government announced its intention to introduce the 2025 Future Home Standard (FHS). The standard would apply to all new build homes, non-domestic buildings and home expansions in England. Similar standards are expected to be introduced elsewhere but with different deadlines. The aim is to future proof homes by delivering low carbon heating and energy efficiency with a goal of a 75-80% reduction in CO_2 emissions. After its introduction, **all new homes will need to be built to this standard as a minimum, though individual local authorities will be permitted to go above and beyond the regulations.**

In order to ease in the new standard, transitional legislation will be introduced prior to 2025. This will include alterations to Part F (ventilation) and Part L (conservation of fuel and power) of the Building Regulations. The timeline of the transition is detailed below:

From June 2022: New homes will be expected to produce 31% less CO_2 emissions, to be achieved through carbon saving technology and improvement to the fabric of the building.

From Spring 2023: There is expected to be a further uplift to current standards, following consultation on the full technical specification for the FHS. June 2023 will be the deadline for work to commence on transitional arrangements.

From 2025: There will be no fossil fuel heating in new 'zero carbon ready' homes and CO_2 emissions must be at least 75% lower than current regulations. New homes will no longer be able to connect to the gas network.

[1] For example see https://www.rics.org/uk/news-insight/latest-news/news-opinion/construction-materials-cost-increases-reach-40-year-high/

methods in all new buildings (see box below), provide a unique opportunity for a fundamental transformation in how we build in the West Midlands and a real opportunity for the region to lead the way nationally in this transformation.

4.0 Proposals for next steps

4.1 This report sets out the **context** and summarises the development to date of WMCA's approach to AMC. As noted by the Housing & Land Delivery Board at its meeting in March 2022, there are significant opportunities and existing assets in the region that could be further unlocked and maximised to help establish the West Midlands as **an exemplar for advanced manufacturing and future homes standards.**

4.2 To maximise these opportunities and take forward the region's ambitions for AMC and Future Homes Standard **together in an integrated way within a defined emboldened AMC Programme**, it is proposed that:

- The WMCA AMC Taskforce, chaired by Mark Farmer (HM Government's advisor on AMC), is asked to help the region be the national frontrunner in AMC and Future Homes Standards – ahead of the national timetable
- This approach will be driven by an overarching AMC Strategy that sets out the vision, rationale, mission and outcomes sought by the region
- WMCA co-ordinates a series of roundtables and engagement events with the AMC industry, developers, skills providers and other stakeholders to inform our approach and the measures to be taken
- WMCA through its work on a Trailblazing Devolution Deal seeks to secure more power, funding and influence at a regional level to support the uptake of AMC across the West Midlands

4.3 Subject to the Board's views and decisions on these proposals, further updates and progress reports will be brought to future meetings as part of the annual work programme for the Housing and Land Portfolio in line with the agreed Corporate Aims and Objectives noted under Section 2.

5.0 Financial Implications

5.1 There are no direct financial implications arising from the Advance Manufacturing in Construction (AMC) paper. There may be, in future, financial implications arising from decisions to progress projects in delivering a regional increase in AMC homes but any such decisions would be subject to WMCA's approved governance and assurance processes.

5.2 At present there is no dedicated AMC funding, any investment in AMC through WMCA will come through the existing devolved funding. An investment case for an AMC Acceleration Fund was previously submitted by WMCA, to date, this additional funding has yet to be secured.

5.3 Any WMCA investment into Advance Manufacturing in Construction (AMC) delivery would be governed and administered through the WMCA Single Assurance Framework and in line with the accounting and taxation policies of the WMCA and HMRC.

6.0 Legal Implications

6.1 Section 113A(1)(a) of the Local Democracy, Economic Development and Construction Act 2009 gives WMCA a power of competence appropriate for the purposes of carrying-out any of its functions. Part 4 of The West Midlands Combined Authority Order 2016 (2016 No 653) confers that the functions relating to any economic development and regeneration in the constituent councils are exercisable by WMCA. Part 3 of The West Midlands Combined Authority (Functions and Amendment) Order 2017 confers functions corresponding to the functions of the Homes and Communities Agency has in relation to the combined area. Paragraph 10 (2) (a) of the 2017 Order confers the function of improving the supply and quality of housing to the Combined Authority, 10 (2) (b) to secure the regeneration or development of land or infrastructure in the combined area, 10 (2)(c) to support in other ways the creation, regeneration or development of communities in the combined area or their continued well-being and 10 (2)(d) confers the function of contributing to the achievement of sustainable development and good design.

6.2 It is noted that the purpose of this paper is to update the Housing & Land Delivery Board on the work undertaken by WMCA, the AMC Officer Working Group and Expert Advisory Group in producing a routemap for accelerating Advanced Manufacturing in Construction in the region. Legal advice should be sought as and when required in the development of the AMC strategy and routemap. Once the AMC requirements have been established the existing requirements for AMC in the Single Commissioning Framework would need to be strengthened and implemented through the funding agreements on a case by case basis.

7.0 Equalities Implications

7.1 There are no direct equalities implications in this report.

8.0 Inclusive Growth Implications

8.1 The proposed AMC strategy will be used to inform WMCA's approach to growing the AMC sector in an equitable way, maximising economic benefits, housing quality and job/skills opportunities across the region's communities.

9.0 Geographical Area of Report's Implications

9.1 The recommendations of this report apply to the whole of the WMCA area.

10.0 Other implications

10.1 None.

11.0. Schedule of Background Papers

11.1 None.

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West Midlands Combined Authority

A Strategy for Advanced Manufacture in Construction

Draft for Consideration by the WMCA Housing & Land Board

October 2020

Cast

West Midlands Combined Authority

Introduction

An introduction will be included here after the Housing & Land Board has reviewed the final draft.

CONTENTS

CASE STUDIES

Why change?

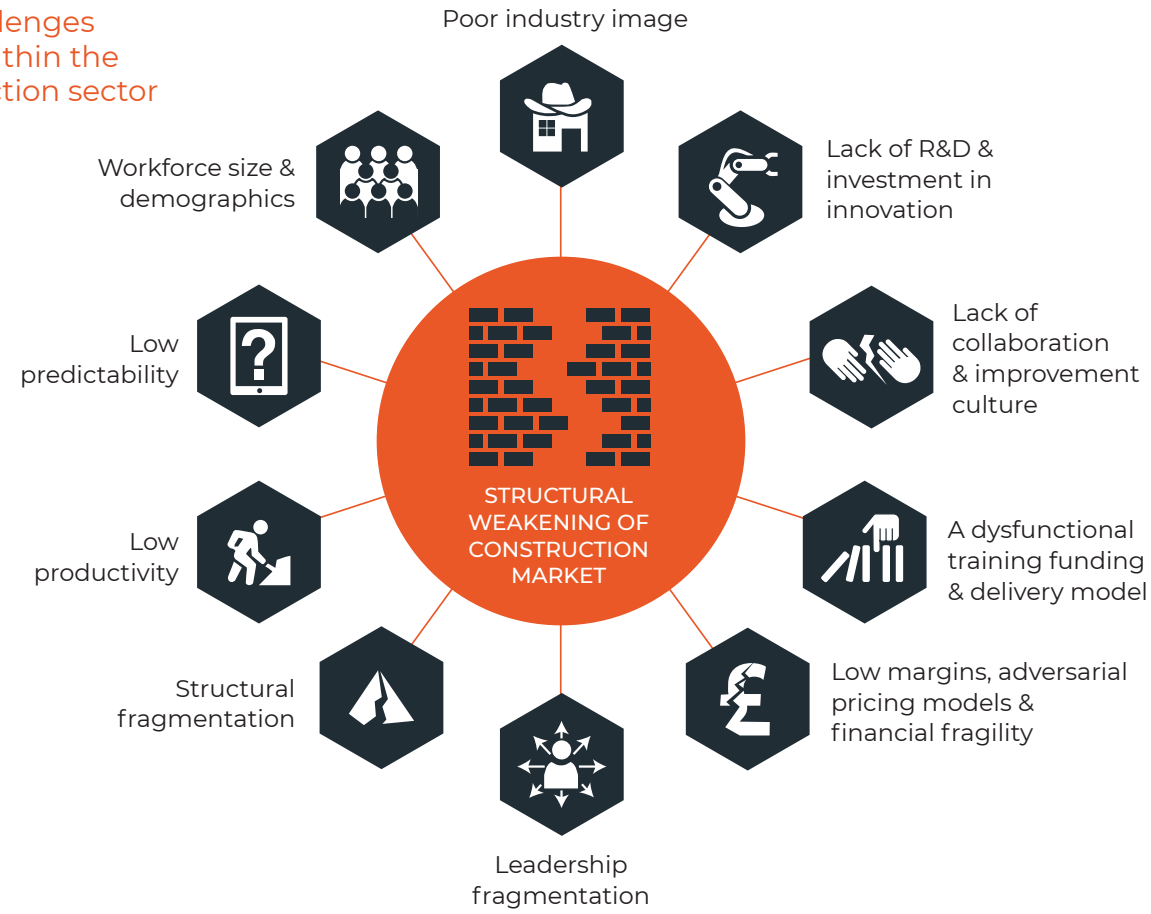
Challenges in the construction sector

The UK construction and housebuilding sector faces severe structural challenges that act as a drag on productivity and innovation. The resulting impacts range from a sector wide culture of short-termism, to new homes not being seen as consumer products in the same way as other large purchases people make, to being a contributing factor to the UK-wide under supply of new homes relative to housing need.

These challenges impact on the ability of the WM to deliver 215,000 and change is required to achieve the quality, pace and performance in housebuilding that the region needs.

> "The Government is determined to build a stronger, fairer Britain where people who work hard are able to get on in life....we will diversify the housing market, opening it up to smaller builders and those who embrace innovative and efficient methods."
>
> – *Fixing our Broken Housing Market* (2017)

The challenges found within the construction sector



Advanced manufacture in construction

What is AMC?

Modern Methods of Construction (MMC)

A term defined by MHCLG to cover a broad range of pre-manufacturing techniques in construction. Pre-manufacturing encompasses work executed away from the final workface including in remote factories, near site or on-site "pop-up" factories. These techniques are alternatives to traditional house building and aim to improve quality, programme efficiency, and reduce material waste in construction. It also includes on site labour productivity measures including digital tools and innovative materials and processes.

Advanced Manufacture in Construction (AMC)

A term which covers a sub-set of the technologies described as MMC. AMC techniques are typified by the fundamental use of digital technology throughout the process, from design through to component manufacture and assembly, and the use of automation and high-performance materials where appropriate to drive quality, performance and mass-customisation through standardised processes. AMC techniques will also learn from, adopt and evolve manufacturing processes already established in other sectors.

The potential benefits of AMC over the long term include:

- Financial benefits with increased speed in construction
- Tackling the skills shortage by changing workforce needs
- Reducing cost and improving site efficiencies
- Making offsite homes a viable alternative through mass production
- Benefit the Zero Carbon agenda by reducing construction waste
- Achieve a fast weathertight envelope
- Improving health & safety with increased oversight
- Future proofing skills and jobs using technology
- Assisting a national, economic & industrial strategy
- Making the sector attractive to a more diverse workforce

Delivering in the West Midlands

While AMC has significant potential to drive a range of long term benefits to the construction sector by focussing on growing AMC use around the West Midlands, we see considerable wider benefits to the region. Specifically, AMC can supporting four of our existing policy goals for sustainable and inclusive manner growth:

Accelerating housing delivery:

WMCA's housing trajectory aims to increase annual housing completions to nearly 18,000 homes per year by 2031. We have a good track record of delivery, with more than 16,000 homes delivered in 2019, up 15% on the previous year, but nonetheless need to maintain and expand upon this level of delivery to maintain the trajectory we need to achieve. In addition, fully 80% of the homes in our trajectory will be built on brownfield land, requiring potentially length remediation ahead of construction.

AMC offers a number of potential solutions – the increased speed of delivery on-site, compared to traditional methods, can offer a partial balance to the time taken on remediation for instance, and specialist MMC developers can offer additionality in new supply to augment the output of other methods of construction. Manufactured components and homes that are created in clean and dry factory conditions also create much greater predictability for build programmes and avoid the worst of the seasonality issues that affect traditional construction, which is particularly beneficial for the delivery of new affordable homes.

Investing in regional and inclusive growth:

The WMCA approach to social value recognises the importance of local businesses within our communities in terms of job creation and wealth generation. We are committed to ensuring local businesses are provided with the skills to compete and offered the opportunity to work within our supply chain. We are also committed to promoting growth and development that ensures our communities develop new skills and gain meaningful employment.

AMC represents a significant growth opportunity for the UK and we are committed to securing the West Midland's share of that opportunity by utilising and growing our manufacturing base to supply our housing need. We also advocate collaboration between WMCA and other authorities around the country to support for our businesses to take advantage of the national growth trend, and not rely solely on demand from our region.

Delivering a zero-carbon future:

In June 2019, WMCA declared a climate emergency, and has set a challenging 80-year carbon budget. As a region, we have committed to taking urgent action to cut harmful emissions, but the impacts of climate change are already being felt and will continue to impact upon the health and wellbeing of our residents and natural resources.

To ensure it contributes its part to the Paris Agreement, WMCA has agreed net zero carbon emissions by 2041. Advanced manufacture in construction, in controlled conditions, offers great potential to move towards carbon neutral homes. AMC processes minimise construction waste, achieve very high standards of in-use energy performance, and can minimise construction vehicle movements, with follow-on air quality benefits. By committing to AMC in new homes, WMCA and partners will be making a conscious and proactive step towards achieving its zero-carbon ambitions.

Design that reflects the character, context, and aspirations of our communities:

The West Midlands is a diverse region with a distinctive set of places all sat within a landscape of high-quality natural environments, an extensive river and canal network and a unique geological heritage. It is also a region in renaissance – unprecedented levels of investment and development over the next decade will shape the way our residents live and work for years to come. The opportunity is one to seize; setting a new benchmark for what 'great places' mean now will enable our residents to prosper, our communities to thrive and our businesses to grow.

Great design can have a huge and positive impact on the quality of life and wellbeing, and we see advanced manufacture in construction as a key enabler in making that vision a reality. We want to harness the opportunity that manufacture brings to create better homes, championing high-quality, design flexibility and consumer choice.

The scale of the opportunity

In developing this Roadmap, we have analysed the current output of the AMC sector across the UK, focussing in particular on MMC category one 3D volumetric solutions and on MMC category two 2D panellised solutions, which are currently the two solutions in focus with the WMCA, as both are now required on 200+ home sites funded by the SCF. The two figures opposite demonstrate the outcome of this analysis, and map that against the UK-wide housing need that has been stated by the Government.

Figure 1 shows that there were approximately 44,000 new homes delivered using volumetric and panelised solutions last year, with the vast majority of these utilising a panellised approach. Our analysis has identified that volumetric providers currently have significant capacity within their existing manufacturing base, which would allow for the production of 15,000 homes from current facilities. Using this, and drawing in other industry forecasts, we estimate that the number of homes developed using these two systems could more than double in the coming ten years, from 44,000 to more than 100,000 annually.

As shown in Figure 2, even at 100,000 new homes annually from these two types of AMC, there would still be significant scope for growth within traditional methods of delivery before AMC started to replace traditional construction, if the UK is to hit the 300,000 home per year target.

AMC, therefore, is clearly a sector with significant growth potential, and the opportunity to provide additional housing supply rather than necessarily competing with traditional construction methods.

By way of comparison, our work has estimated that the WM AMC sector has capacity to deliver around 4,500 new homes using AMC today – roughly 10% of the UK-wide output – and that presently it is delivering around 2,000 to 2,500 homes per year from that capacity. Approximately 12,000 homes per year have been delivered, on average, over the past seven years in the region and so this level of output is equivalent to approximately one in six of every new homes in the region, although of course much of the AMC output could have been exported out of the region.

WMCA's housing trajectory shows that the current 12,000 home per year average needs to increase to nearly 18,000 homes per year by 2031, and so were the sector in the region to double its output, to 5,000 homes per year, it could do so and not replace traditional construction on the assumption that the 18,000 home target is met and traditional construction remains stable.

Figure 1
National growth potential for MMC

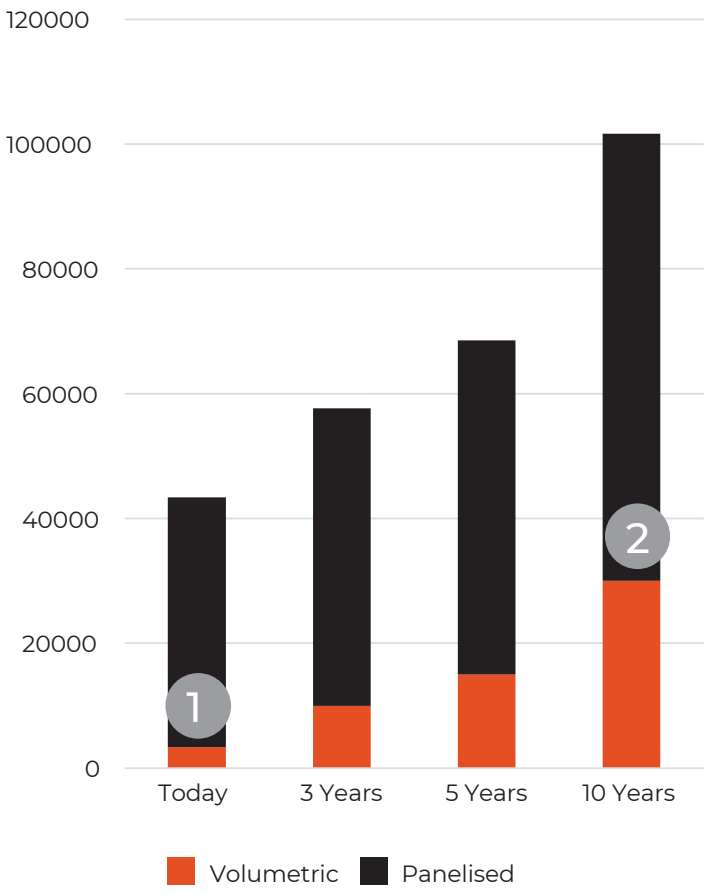
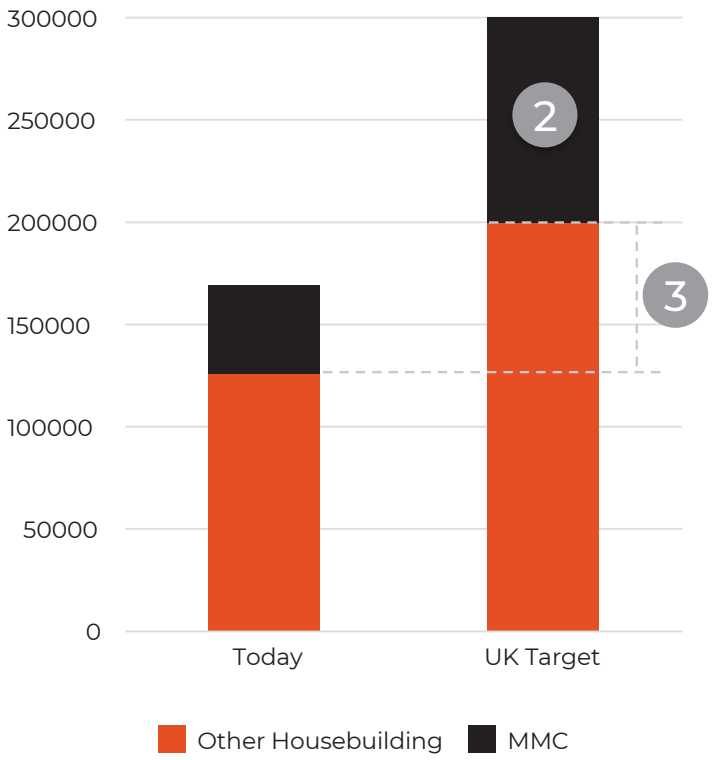


Figure 2
Building capacity for a growing housebuilding sector



1

3,300 volumetric & 40,000 panelised homes in 2019

2

30,000 volumetric homes & 71,000 panelised homes by 2029

3

Further 70,000 homes opportunity before MMC replaces traditional construction output

Understanding the economic MMC opportunity in WMCA

In partnership with

HATCH REGENERIS

Much has been made about the novel nature of MMC and how it can be used as a key pillar to tackle the UK's housing crisis. There has however, been limited insight on the economic opportunity that MMC presents. This section explores the nature of this economic opportunity, reflecting both the current picture of MMC nationally and within the West Midlands Combined Authority (WMCA). Consideration is also given to the national growth potential of MMC and what this could mean for WMCA economically speaking if it were to seize the opportunity that emerges. In this chapter we use the broader MMC term to frame our research, in order to understand the long term potential of all aspects of the MMC definition framework.

Strategic significance

In order to understand the specific opportunity that MMC presents to WMCA, a consideration of the wider strategic significance of the sector is required. To this end, this section provides a wider framing of the national priorities of MMC and more broadly how MMC can deliver economic value.

The national challenge

The construction sector is a significant component of the UK economy

The construction sector in the UK represents around 6 per cent GDP and 10 per cent employment with an estimated £150 billion invested through public and private sectors[1].

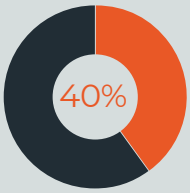
Construction productivity is lagging

In the past two decades, productivity growth in the construction sector stood at just 10 per cent, compared to 20 per cent across the economy as a whole and 65 per cent in the manufacturing sector[2].

Enhancing the pace of house building is essential

The Housing White Paper entitled *Fixing our broken housing market* published by the government in 2017 listed three main challenges facing the housing market:

- Over 40 per cent of local planning authorities do not have a plan that meets the projected growth in their area
- The pace of development is too slow
- The very structure of the housing market makes it harder to increase supply



The government has committed to resolving these challenges through the introduction of more efficient methods.

The built environment is significant generator of carbon emissions – 45% of total UK carbon emissions derive from the construction, operation and maintenance of the built environment[3]. There is a clear and urgent need to develop more advanced construction models that can deliver better performing homes more quickly than traditional models.

1 RICS: "Policy position statement: Modern Methods of Construction". https://www.rics.org/uk/news-insight/latest-news/press/press-releases/modern-methods-of-construction/

2 Infrastructure and Projects Authority: "Transforming Infrastructure Performance". https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664920/transforming_infrastructure_performance_web.pdf

3 The Royal Academy of Engineering: "Engineering a low carbon built environment". https://www.raeng.org.uk/publications/reports/ engineering-a-low-carbon-built-environment

The economic value of MMC

MMC accelerates the pace of housing delivery

A report by the National Audit Office found that using new methods of construction could reduce construction time by more than half, and enable up to four times as many homes to be built with the same on-site labour[4]. The potential for acceleration of housing delivery provides additional benefits related to the time preference of economic impacts (where future impacts are discounted at 3.5% a year – in line with Treasury Green Book guidance).

MMC can enhance the density of housing

The potential for high density housing constructed by MMC is rapidly being realised. In London, two towers which are to break the record for tallest modular building are approaching completion. The 44 and 38-storey residential towers at 101 George Street, Croydon will have been built in around 24 months and half the time of traditional methods[5]. Nearby, planning permission has also been granted for a further two towers which will again break the record for tallest modular building, including a 930-unit co-living tower[6].

MMC is a driver of productivity

Various studies have emphasised the productivity benefits that MMC can deliver[7]. The MMC process is typically more capital intensive than traditional house building, and the off-site nature of building can allow for a greater specialisation of roles – by adopting factory style manufacturing practices

MMC can generate significant carbon savings

Evidence from Arcadis suggests the higher environmental performance of MMC has the potential to reduce energy bills from average £800 per annum to circa £300-400 per annum. This is equivalent to reducing energy usage by 3,200 kWh per home per year by conservative estimates. These savings are able to be monetised and represent both significant economic value as well as notable savings to homeowners.

Alignment with economic priorities of WMCA

The value of MMC within the WMCA is both strategically and economically significant. At the same time the WMCA faces both productivity and housing challenges, in addition to the challenge of sustainable economic development of the region within the context of twenty-first century climate change.

Housing

The Strategic Economic Plan estimates that to accommodate a growing population of an additional 500,000 people, the West Midlands housing stock will need to increase by an additional net 215,000 homes by 2031. This target is equivalent to around 24% of the West Midlands total dwelling stock[8].

Please can we change the first sentence to the following: The Government backed Housing Deal securing in March 2018 supports the delivery of these 215,000 homes by 2031, with annual delivery required to rise to nearly 18,000 homes per year by that time. The West Midlands has a good track record of delivery, with more than 16,000 homes delivered in 2019, up 15% on the previous year, and AMC represents a significant potential enabler to achieve this higher annual output in ten years time[9]. The establishment of a long-term partnership with Homes England aims to support this housing deal through initiatives including the exploration of the potential for Modern Methods of Construction and other innovative opportunities within the West Midlands.

4 National Audit Office: "Using modern methods of construction to build homes more quickly and efficiently". https://www.nao.org.uk/wp-content/uploads/2005/11/mmc.pdf
5 Centre for London: "Made for London: Realising the Potential of Modern Methods of Construction". https://www.centreforlondon.org/wp-content/uploads/2018/09/Centre-for-London-Made-in-London.pdf
6 Planning Resource: "Croydon approves 49-storey 950-unit modular co-living scheme". https://www.planningresource.co.uk/article/1675633/croydon-approves-49-storey-950-unit-modular-co-living-scheme
7 Modern Methods of Construction – Introducing the MMC Definition Framework https://www.buildoffsite.com/content/uploads/2019/04/MMC-I-Pad-base_GOVUK-FINAL_SECURE-1.pdf
8 Subnational dwelling stock by tenure estimates, ONS, 2019. https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/subnationaldwellingstockbytenureestimates
9 West Midlands housing package. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/689710/W_Mids_overview.pdf

The West Midlands became the first region to re-define and introduce a localised definition of affordable housing that links the definition to the real-world incomes of people in the area, rather than local house prices.

The West Midlands built almost 17,000 properties in 2018/19 which represents a rise of 15% from the previous year and double the UK average increase[10].

Productivity

Construction is identified as a key sector strength within the West Midlands Local Industrial Strategy, with a specific focus on offsite modern manufacturing and land remediation[11]. Creative content, techniques and technologies is identified as a new market opportunity and includes the modular construction of high quality, low energy homes as a sector worth £2-3bn per year in the UK, with modular build growing by 25 per cent per year.

Major investments in the region such as HS2 and accelerated housebuilding are to be supported by the Construction Gateway skills programme which seeks to ensure that the demand for construction jobs within the region is met.

Local actions of the LIS include supporting new entrants to the market to support the increased delivery of housing such as through modular housing, and to work with the sector to enhance process innovation via modern methods of construction.

The WMCA Construction Action Plan Draft, published in May 2019, identifies construction as a significant part of the local economy and major employer of almost 200,000 people within the WMCA area[12]. Offsite construction already represents **over 15% of total construction sector output in the West Midlands**, with significant future growth expected, including the West Midlands ambition of delivering 25% of homes through advanced methods of construction (AMC) by the early 2020s and the majority of delivery by 2031.

While existing strong advanced manufacturing capabilities across the WMCA can assist in developing a world class offsite manufacturing capability, the Draft Plan highlights a lack of offsite training provision as one of the biggest potential challenges to exploiting the growth of offsite construction within the region.

The West Midlands Strategic Economic Plan highlights housing as a priority action which will be supported by a range of initiatives, most relevant which include the support of local off-site construction, supporting SME housebuilders and supporting the development of low carbon and zero carbon homes[13].

Climate emergency

The WMCA declared a climate emergency in June 2019[14] and the Combined Authority is working towards becoming carbon neutral by 2041, as outlined in the WM2041 green paper in January 2020[15].

Under 'we will create places and connections that help us to meet the climate challenge', all new build infrastructure is to be constructed thoughtfully and energy efficient, in order to achieve the ambitious 215,000 homes to be built by 2031. The emissions associated with construction and new homes could add £100-£300m to annual regional energy spending at current prices. With this in mind, ensuring new homes are zero carbon will provide both an economic and environmental boost to the region.

WMCA are developing a routemap for delivering zero carbon homes by 2025, with a focus on operational carbon in the short term and embodied carbon in the medium term.

10 West Midlands Combined Authority: "West Midlands becomes first region to re-define 'affordable housing'." https://www.wmca.org.uk/news/west-midlands-becomes-first-region-to-re-define-affordable-housing/
11 West Midlands Local Industrial Strategy. https://www.wmca.org.uk/media/3094/west-midlands-local-industrial-strategy-single-page.pdf
12 WMCA Construction Sector Action Plan Draft. https://www.blackcountrylep.co.uk/upload/files/Industrial%20Strategy/WMCA%20Construction%20Action%20Plan%20May%202019%20(002).pdf
13 West Midlands Combined Authority Strategic Economic Plan. https://www.wmca.org.uk/media/1382/full-sep-document.pdf
14 West Midlands Combined Authority: "Climate Public Engagement". https://beta.wmca.org.uk/the-mayor/climate-public-engagement/
15 West Midlands Combined Authority: "Zero carbon WM by 2041" https://www.wmca.org.uk/media/3639/wm2041-final.pdf?_ga=2.125254194.1070291611.1597070437-1251179460.1597070437

Approach

Determining the scale of the MMC opportunity

To understand the scale of the sector nationally a desk-based review of MMC literature and engagement with industry experts has been undertaken to determine the scale of MMC delivery at present as well as future growth scenarios. These have been applied to MHCLG house building data to establish levels of MMC delivery.

Through engaging with MMC manufacturers a determination of employees relative to housing output has been established, which has been applied to the national picture to gather a high level estimation of employment. Jobs figures have been applied to GVA per FTE data from the ONS to determine what the level of economic output currently is and could be if MMC growth reached the levels anticipated.

To establish what this could mean for WMCA, a series of notional statements have been tested. These include WMCA securing a certain proportion of the national MMC growth and what this could mean in economic terms.

Understanding WMCA's relative MMC proposition

To derive a relative understanding of the MMC proportion in WMCA relative to other locations a scan of other prominent MMC locations has been undertaken to determine the sector's:

- Scale
- Specialisation
- Distinctiveness

To do this, data has been drawn from an array of public and private datasets.

Here, ONS data of the broad construction sector is used to understand the scale of opportunity for AMC to grow and support the wider construction sector regionally. As the construction sector definition does not allow for a determination of MMC activity, this has been supplemented with an additional approach. Here, a manual interrogation of WMCA scraped web data from Glass.ai has been undertaken to get a better understanding of MMC beyond the stringent SIC Code definition of construction

To understand the relative scale and distinctiveness of WMCA as an MMC location, a series of wider comparator locations have been selected. These provide a valuable reference point to understand relative scale, concentration and distinctiveness of MMC activity. These locations are detailed spatially on Figure 3 below.

Figure 3

WMCA as an MMC location, a series of wider comparator locations have been selected.

Findings

MMC currently generates notable economic value nationally

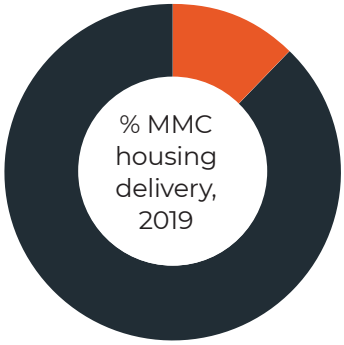
At the national level MMC at present is delivering a notable amount of units, but is currently making a small contribution to national house building efforts:

Using assumptions from wider industry reports and insights from sector experts, it is estimated that there are currently 27,000 homes built per year via MMC methods.

It is anticipated that currently only a small proportion of these homes are built using volumetric methods – an entirely new source of housing supply where the manufacturer is also the contractor and therefore is adding a new form of housing supply to the UK market.

Figure 4
MMC housing delivery, 2019

	% of Total UK Housing Delivery	Homes
Volumetric	2%	3,380
Panelised	14%	23,660
Total MMC		27,040

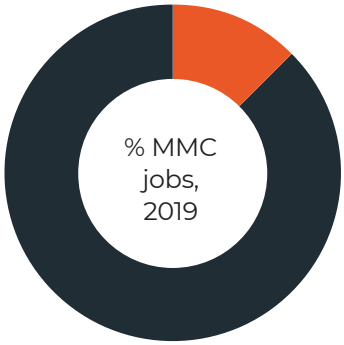


MMC house building sustains a significant amount of employment

It is estimated that the sector currently sustains in the order of 8,100 jobs nationally. Again, only a small proportion of these (1,010) are currently sustained by the volumetric market which is where the real driver and value add of the MMC sector lies.

Figure 5
MMC jobs, 2019

	Jobs
Volumetric	1,010
Panelised	7,100
Total MMC	8,110

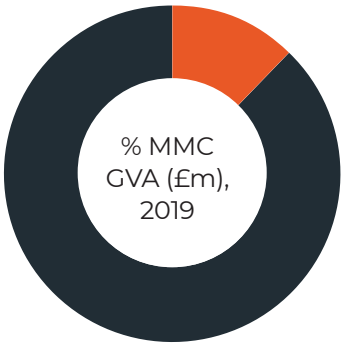


MMC house building jobs sustain a notable level of economic output

MMC jobs contribute in the order of £500m GVA per Annum to the UK Economy.

Figure 6
MMC GVA, 2019

	GVA (£ Millions)
Volumetric	£80
Panelised	£558
Total MMC	£638



In the coming years, MMC is set to grow considerably.

It is estimated that there is already notable latent capacity in the sector in the order of around 7,000 homes per annum. Furthermore, it is estimated that the sector is set to grow at 6% per year[16] .

The sector is currently dominated by panelised construction. However, it is also anticipated that volumetric construction has the potential to account for a significantly larger share in the future. Growth of the sector has been considered on the basis that:

- Latent volumetric capacity is realised in the next five years.
- The wider sector continues to grow at 6% pa thereafter.
- Growth of volumetric occurs at a faster rate to account for a larger share of MMC capacity.
- Overall capacity increases to 56,000 homes by year ten (which is broadly in line with *the Farmer Review* which estimates the potential to reach 50,000 homes through MMC methods).

Overall housebuilding is expected to increase above the current level of 169,000 home per annum – closer to the government's target of delivering 300,000 new homes by the mid-2020s. Expansion of MMC will diversify the supply of housing, encourage new market entrants and draw on supply chains that are complementary to existing housebuilding delivery approaches. It therefore has the potential to provide a key element in securing a significant expansion of housebuilding. On this basis, the growth of MMC is assumed to be additional to the current housebuilding sector and will not displace other forms of housing delivery.

The suggested growth of MMC still requires other forms of house building (including traditional methods) to increase by over 100,000 homes over this period.

The level of growth proposed for MMC is equivalent to 5-9 new factories (with a capacity of 1-2,000 homes per annum) coming online within the next decade (less than one per year).

Figure 7
Housing delivered via MMC

	3 Years	5 years	10 Years
Volumetric	10,000	15,000	24,158
Panelised	25,857	27,432	31,801
Total MMC	35,857	42,432	55,958

Were the sector to grow as set out above, it would sustain support a significant amount of national employment:

10,800 jobs in 3 years, 12,700 in 5 years and 16,800 in 10 years. This compares to an estimated 8,100 jobs today – and represent growth of 8,800 over this period (a doubling of employment across England).

Figure 8
Jobs directly supported through MMC

	3 Years	5 years	10 Years
Volumetric	3,000	4,500	7,200
Panelised	7,800	8,200	9,500
Total MMC	10,800	12,700	16,800

16 Frost and Sullivan project an annual growth rate of 6.3% from 2018 to 2025 https://ww2.frost.com/news/press-releases/global-modular-and-prefabricated-building-market-set-for-robust-cagr-of-6-3-from-2018-to-2025/

These jobs would deliver a considerable degree of economic output:
Over £1.3 billion, compared to £630 million today.

Figure 9
GVA generation directly supported through MMC (£m)

	3 Years	5 years	10 Years
Volumetric	£236	£354	£569
Panelised	£609	£647	£749
Total MMC	£845	£1,000	£1,319

What this could mean for WMCA

Whilst it is difficult to say exactly what this may mean for WMCA, it is possible to set out some indicative scenarios of what proportion of this national activity WMCA could reasonably secure. These notional levels of MMC activity are not a prediction of the level of growth WMCA will secure, but set out the scale impact that could materialise if WMCA is able to grasp the opportunity that lies ahead.

On this basis the notional opportunity for WMCA is for the area to secure additional capacity for 2,000 homes per annum, which represents circa 10% of the UK's additional volumetric production within the next ten years – equivalent to 2 factories with 1,000 homes per annum capacity or one larger facility.

If WMCA was able to secure this level of MMC growth, this could deliver:

2,000 homes
per annum

Support 600 jobs
(within the factory)

Deliver £47 million
GVA per annum

As identified above, our evidence suggests that growth in MMC, particularly that around volumetric is **highly additional and will not displace existing construction activity**. This has been brought to light through a series of sources. The engagement process with those involved in MMC has suggested that manufacturers are looking to different skills sets and different types of people to fulfil these roles, with an emphasis on digital and design skills. Moreover, this form of construction is a completely new form of housing supply to the UK market and as such would supplement traditional approaches which would cumulatively help the UK to realise its national house building targets.

This activity is also likely to generate a considerable degree of economic value through the **wider supply chain**. Here, a series of high level estimations of indirect impacts can be generated[17]. It is anticipated that MMC activity will indirectly **support 560 jobs** in the supply chain, generating in the order of **£44m in Gross Value Added**.

The delivery of 2,000 homes per annum would secure around 13% of WMCA's housing target for 2025 onwards. This could be considered a cautious estimate, and demand can be aggregated nationally in the future, as has been proposed in the recent *Build Homes, Build Jobs, Build Innovation* report by Mark Farmer and Mike De'ath, then the potential for MMC manufacture in WMCA may be even greater.

17 The multipliers are taken from the Hatch Regeneris Input-Output model (last updated in 2017). These impact capture the indirect impacts of employment and outputs (i.e. the spend in construction supply chains). Further impact would be associated with the induced impacts of employee expenditure in the local economy.

Construction sector at large

Understanding the wider construction sector across WMCA can provide valuable insights into the area's current construction credentials and an indication of how well placed the sector is to support future MMC activity that comes forward.

Whilst the construction sector is slightly less specialised and there is a lower concentration of businesses than is seen nationally, there is a critical mass of construction activity equivalent to 55,000 jobs across 10,295 businesses. This represents 4.3% of the total jobs and 9.7% of the total businesses across the West Midlands Combined Authority.

Within the construction sector there is a strong concentration of heavy infrastructure activities (Figure 10) which are relatively small sectors nationally, but large employers in the West Midlands. Notably:

The construction of railways is:

x 22

the level seen nationally

The construction of roads and motorways in WMCA is:

x 5

the level seen nationally

The construction of commercial buildings is also more specialised than the national profile:

x 2.7

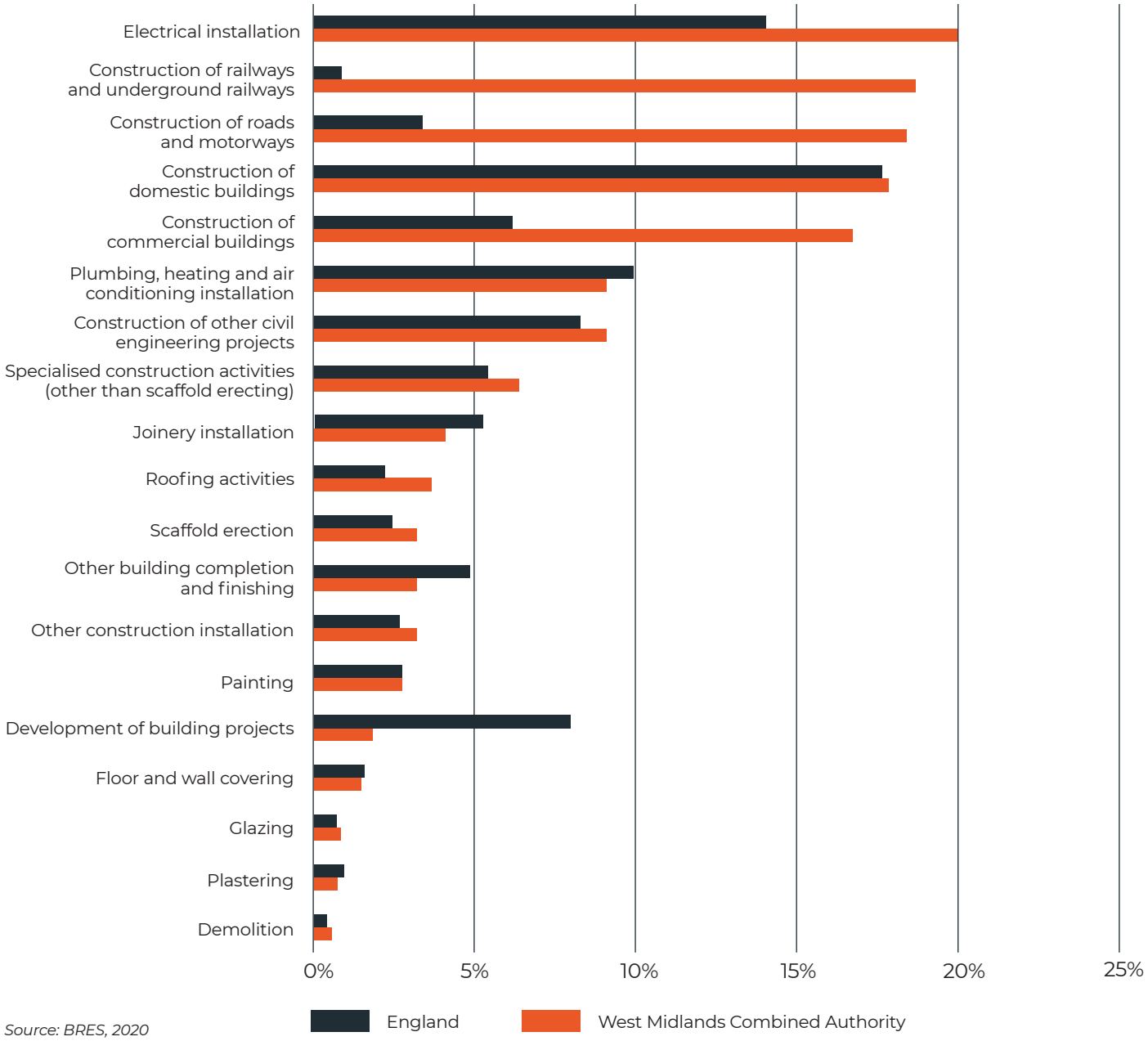
the national concentration

These sectors require highly specialised expertise and skills and reflect the tacit knowledge that exists within the construction sector locally. This provides a strong foundation for the growth of MMC activity going forward.

Supporting sector

The sector is made up of a strong presence of sub sectoral activities that will support any core MMC activity that takes place. These are summarised in the accompanying chart to the right and include a prominent commercial building sector as well as supporting activities such as electrical installation, plumbing, heat and air-conditioning and roofing. All of these activities are highly likely to supplement any MMC activity that comes forward and provide an important foundation and supply chain for the sector to grow.

Figure 10
Construction sector profile (2018)



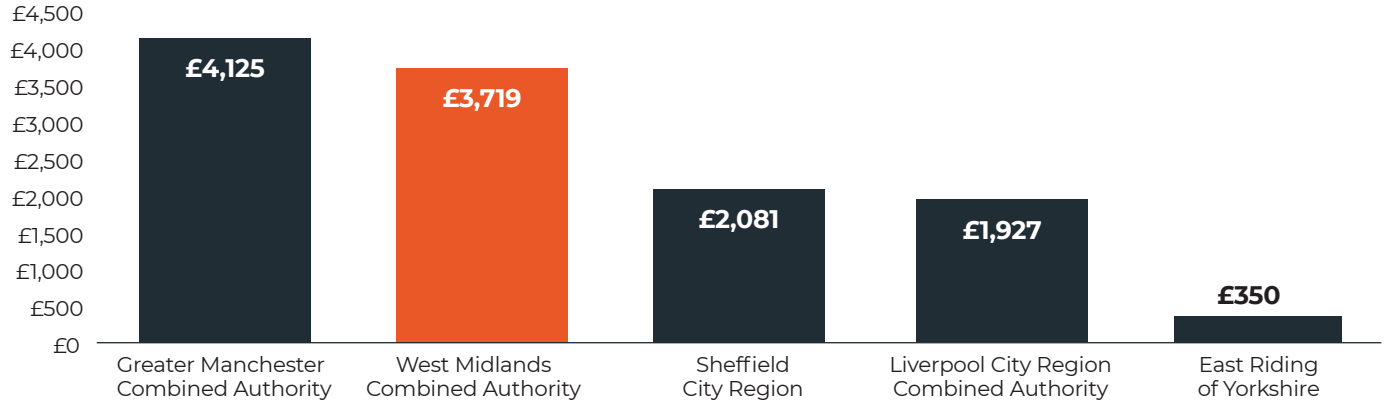
Source: BRES, 2020

Construction productivity

The West Midlands' Construction Sector is relatively large in gross terms

GVA of £3,700m indicates that in terms of scale the wider construction sector is significantly larger than the Sheffield and Liverpool City Regions but is lower than the GMCA.

Figure 11
Construction sector total GVA (Millions)

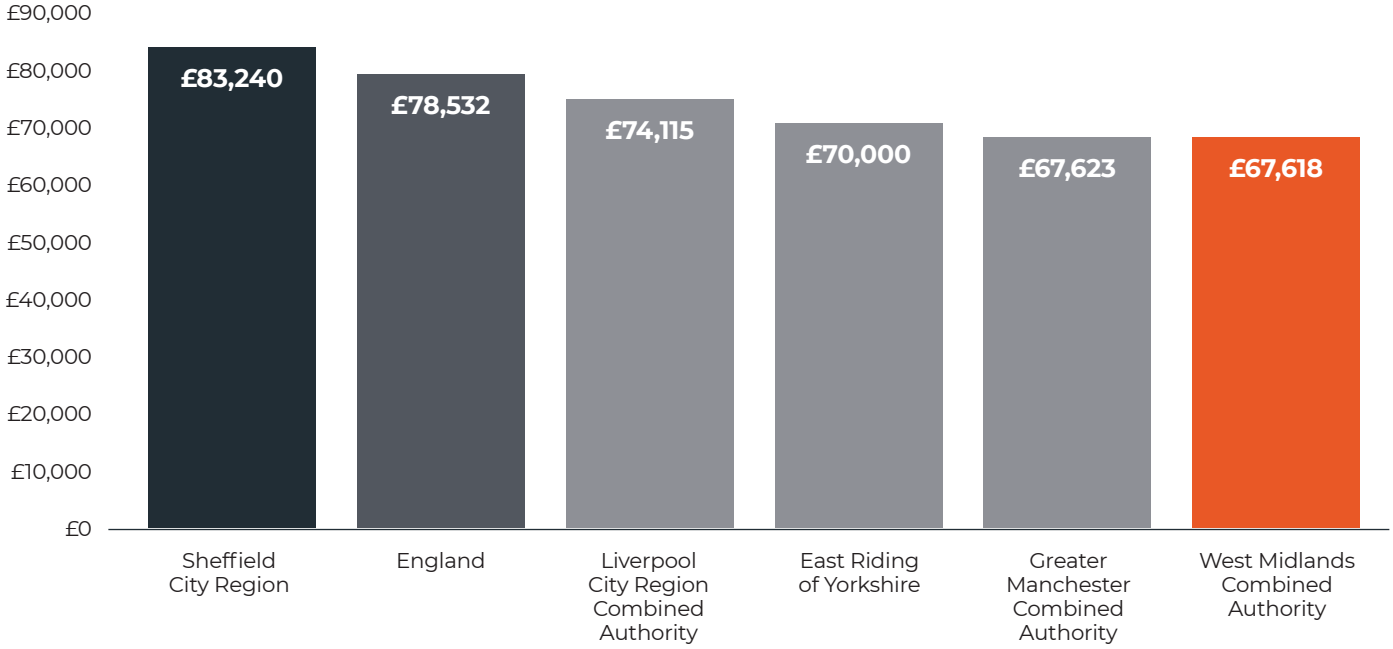


Source: ONS, 2019

In relative terms the West Midlands Combined Authority has low productivity across the construction sector

GVA per FTE of £68,000 is significantly lower than the comparator locations and national average. This reflects the lower levels of specialism in the WMCA construction sector than comparator locations, and its relatively larger employment in supply chain sub-sectors that are less productive in nature. To this end, MMC provides a means by which to improve productivity in the construction sector locally and meet the WMCA strategic ambitions to secure greater productivity in the area.

Figure 12
Construction sector GVA per FTE



Source: ONS, 2019

MMC related activities

Clearly, a large degree of MMC related activity will not be picked up or specifically identified through a traditional SIC Approach. To get around this issue data has been used from Glass.ai, which uses bespoke web crawling techniques to pinpoint companies that are engaged in relevant cyber and digital activities, by assessing company characteristics from their online presence.

Whilst this process provides a much deeper layer of analysis and goes beyond the limitations of SIC codes, it may still overlook companies that do not have an active website but are legitimate trading entities. As such, this has been used here to get an understanding of the relative strength of different MMC locations and to determine levels of specialisation in *MMC related activities*.

The data suggests that WMCA has a very strong specialisation of MMC related businesses with three times the level seen nationally. This is the most specialised location across all the comparators reviewed as part of this research.

A review of the companies that sit behind this data indicate that there is a diverse range of businesses operating in MMC related activities. These activities represent a strong foundation for the growth of MMC within the West Midlands and are summarised below.

Concentration of MMC related businesses (LQ)
West Midlands Combined Authority 2.9
Sheffield City Region 2.6
Liverpool Combined Authority 2.3
London 2.1
GMCA 1.7

Activities focused in supply chains

- Renewables & sustainability
- Energy
- Building materials
- Architecture & planning
- Transportation
- Mechanical and industrial engineering

Understanding the current AMC supply chain

In partnership with

ARCADIS Design & Consultancy for natural and built assets

Engaging with and understanding the West Midlands' AMC businesses

In order to understand the starting point for AMC in the West Midlands, we have undertaken a comprehensive mapping and engagement project, researching the market as it stands. Our research followed six streams:

1. Volumetric and panelised AMC manufacturers
2. Principal contracting businesses:
3. Types of businesses that could be involved in supplying the emerging AMC market and how many are in WMCA
4. Enabling assets: physical infrastructure, political and regulatory assets within the region
5. What is happening and future potential in innovation and R&D
6. Map how the housebuilding sector in WMCA compares to northern and national comparators

Methodology for discovery / analysis

Our research followed six streams:

1. **Volumetric and panelised AMC manufacturers:**

   The geographic boundary of research was outlined as the WMCA region. The Arcadis National AMC manufacturers database was filtered to identify manufacturers within the region. This short-list was validated through internet research and further validated through phone conversations/engagement calls with industry experts and manufacturers.

2. **Principal contracting businesses:**

   Definitions of "Principal Contractor" and the geographic boundary of research were developed. Internet searches were conducted to identify principal contracting organisations within the region. This information was validated through engagement calls with key principal contracting organisations and AMC manufacturers.

3. **Types of businesses that could be involved in supplying the emerging AMC market and how many are in WMCA:**

   Arcadis' AMC Residential value chain was used to identify ten types of business supplying AMC manufacturers (see below). Internet research and engagement calls were then used to develop a high-level supply chain analysis of the AMC ecosystem within West Midlands which was further validated through phone conversations.

4. **Enabling assets: physical infrastructure, political and regulatory assets within the region:**

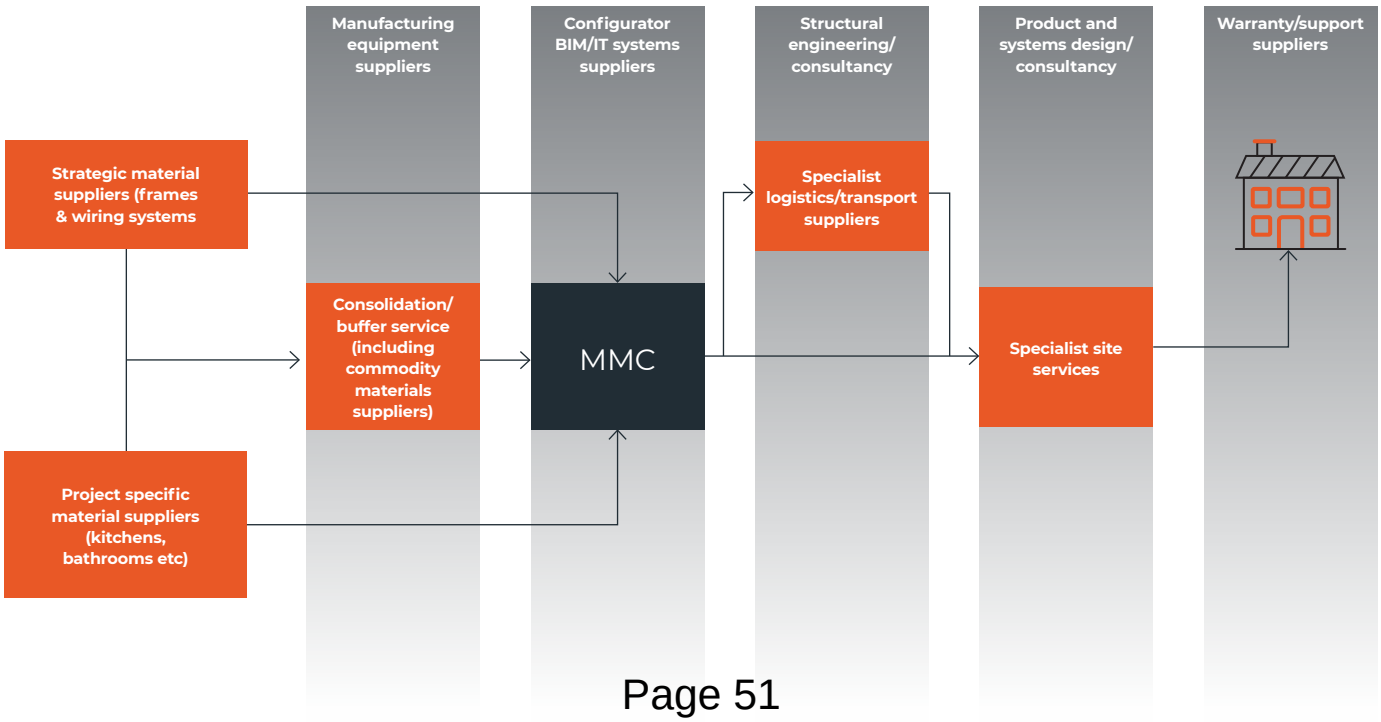
   Internet desk research into the region's physical infrastructure assets was focussed on the logistics network surrounding WMCA (key roads and motorways, rail and intermodal freight terminals and airports), accompanied by the WMCA Transport strategy. Political and regulatory enablers within region were identified through engagement calls with AMC manufacturers, house developers, supplying organisations and research institutes.

5. **What is already happening and future potential in innovation and R&D:**

   Research into the Innovation and R&D within the region was conducted through a combination of internet research and engagement calls.

6. **Mapping the housebuilding sector in WMCA and comparison with northern and national comparators.**

Figure 17
Types of businesses supplying AMC manufacturers



AMC Eco-System Findings

Volumetric and panelised manufacturers

Nine Tier 1 AMC residential manufacturers are located within the West Midlands:

- Totally Modular
- Local Homes
- Innovare Systems
- Dynamic Build UK
- Elements Europe
- Frameclad
- Modpods International
- Hadley Group
- Space4

These are comprised of four volumetric manufacturers and five panelised manufacturers. WMCA has a strong AMC manufacturing capability due to the high concentration of manufacturing within the region and there is potential to service the requirement for affordable housing in the region from its local supply base.

Figure 18
Location of AMC manufacturers within WMCA

V Volumetric (Cat 1) P Panelised (Cat 2)

There is an opportunity for WMCA to attract additional AMC manufacturing capability to the region. ilke homes represents an example of not only an AMC manufacturer but a fully integrated housing developer currently outside the region with a desire to have multi-region manufacturing capability; they have recently opened an office within Birmingham.

It was expressed through our engagement sessions that a higher degree of collaboration and engagement with WMCA would be beneficial in enabling growth in the sector regionally, as multiple AMC manufacturers within the region are looking to scale their operations.

All AMC manufacturers engaged through the interview process have declared strategies encouraging local sourcing within their supply chain.

Other enablers and insights emerging from engagement calls with AMC manufacturers include:

- Three factors identified when analysing the AMC landscape within a region:
  - Housing demand – evident in WMCA
  - Land availability – no group currently in place to represent landowners
  - Offsite manufacturing capability – evident in WMCA
- Aggregation of regional pipeline for affordable housing
- Consistency and certainty of demand would encourage manufacturers to further invest in scaling operations or additional shifts
- Changes in the planning system towards a preference for volumetric construction would aid growth of the industry

Manufacturers engaged through this process also felt that the Government could act as an enabler in the following ways:

- Clear and concise standards and regulations, which might include housing standards and building regulations, all of which were considered important criteria for creating standardisation of demand
- Zero carbon economy, insulation requirements and other stricter building regulations could signal the end of achieving energy efficiencies from traditional methods
- Enable manufacturers to build to standards with a clear criteria or target to adhere to
- Planning pre-approval for standard house types or portfolios would also be an aid to growth
- Early engagement in the development cycle with local authorities, housing associations and other providers is important as are long-term relationships and open dialogue
- Government assistance and financial help for R&D and manufacturing
- Earlier engagement in the procurement process for the public sector

Contractors

Principal contractors are defined as 'Contractors appointed by the client to have control of the construction phase of the project; to plan, manage, monitor and coordinate health and safety during this phase'.

Eight prominent principle contractors operate within the Residential AMC sector in WMCA:

- Seddon
- Henry Riley
- F1 Modular
- Bowmer & Kirkland
- Keepmoat
- Farrans
- Grahams

Keepmoat has identified AMC as a major part of their strategy to deliver affordable homes and zero carbon housing, with plans to develop 400 modular homes with their volumetric module supplier ilke Homes. They also have a strategy to increase their timber frame AMC offering (currently 10% of their revenue) and provide a turnkey solution which includes land development.

ilke Homes has recently opened an office within WMCA and have a vision to operate within the region as a fully integrated housing developer with an aim to acquire land, get consent and supply finished modules enabling them to bring homes to the market more quickly. With a strategy to operate as a principal contractor within residential AMC projects and to collaborate with housing associations and local contractors, this highlights an example of the strategy of many AMC manufacturers to adopt vertical integration and add principal contracting to their offering pushing towards turnkey solutions.

All contractors engaged in this research shared an ambition to improve their AMC capability and scale their offering by increasing the number of houses developed using AMC. They believe that manufacturing capability in and around the region is key to their supply chain and an enabler to fulfilling their demand for their affordable housing requirements.

Enablers identified in engagement calls with contractors include:

- Traditional principal contractors accommodating AMC requires large-scale changes to existing operations
- The majority of housing projects have been principally designed for traditional construction and must be redesigned for AMC; WMCA can counter this by encouraging AMC concepts early on in planning and development cycle
- Currently AMC costs are considerably higher than traditional build; to justify using AMC methods they need to access additional grants that Housing Associations have access to.
- Public sector could help force the private sector and wider construction industry to look ahead with policies e.g. a percentage of new developments should be built using AMC methods
- Homes England are key to funding and research, understanding that there is land to unlock in the coming years, introducing restrictions on types of homes on the land unlocked is a key player in increasing volumes
- Help-to-buy stimulates demand
- Forward visibility of housing plans and projects is key
- Open conversation with key stakeholders and early engagement in local plans
- Warranty providers and their ability to offer insurance to customers is critical

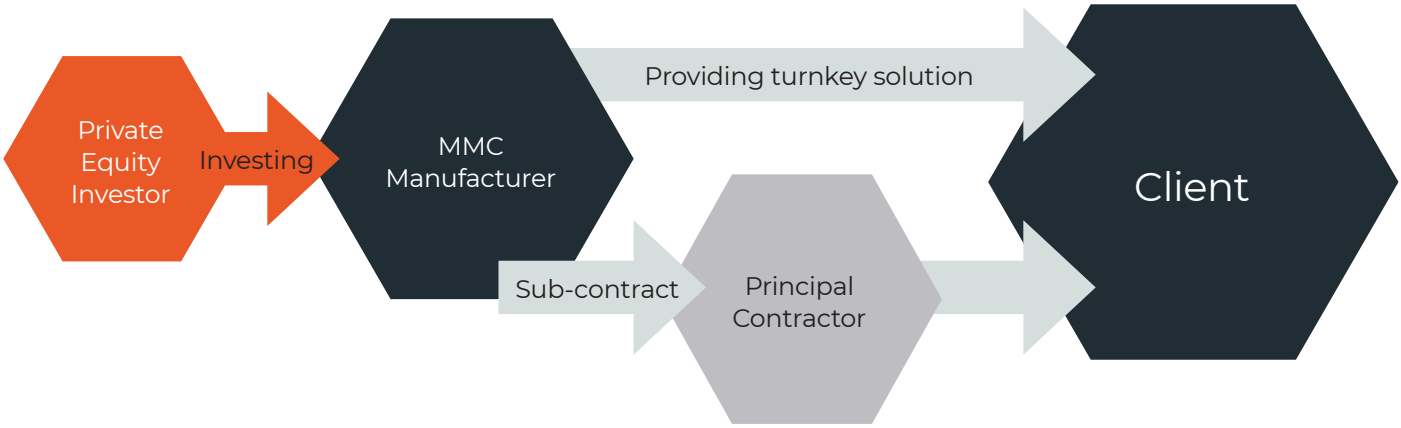
Further observations include:

- Private equity investment into AMC

The figure below outlines a common theme within the AMC ecosystem which has been identified through research and the engagement calls with AMC manufacturers. There is a wealth of evidence of Private equity-based investors entering the AMC residential development landscape and investing in AMC manufacturers. This is providing the capital for the manufacturers to invest and develop their facilities and their production capability to deal with the forecasted growth in demand for affordable homes. Examples include Impact Capital investment in Lesko Modular, TDR Capital investment in ilke Homes and Goldman Sachs investment in TopHat.

Private equity investment could potentially extend further down the AMC supply chain with the acquisition of strategic component suppliers to further support and secure the pipeline and resource for affordable housing.

Figure 20
Private equity investment and manufacturers providing turnkey solutions



AMC manufacturers providing turnkey solutions

There is also evidence that AMC manufacturers are moving upstream by providing turnkey solutions directly to the clients and in doing so bypassing principal contractors. Examples from our engagement sessions of manufacturers adopting the strategy of vertical integration, upscaling their principal contracting and housing delivery capabilities to provide turnkey solutions include:

- Innovare systems
- Hadley Group
- Accord Group
- ilke Homes
- Totally Modular
- Dynamic Build UK
- Elements Europe

In this model, onsite work is still subcontracted to local organisations for activities such as groundwork and site installation, but this is under the management of the manufacturer. There are also instances where the manufacturer has acquired these service providers to expand their offering.

This model provides an opportunity for local contractors and SMEs to become specialist partners to AMC manufacturers within region supporting the growth within their offering and the sector as a whole.

- AMC manufacturers are keen to take on principal contracting roles and sub-contract on project basis to complete on-site installations
- Where manufacturers work through a principal contractor, they typically require a concrete slab, site access and scaffolding (for panelised products) and then installation is conducted by their own employed teams or installation sub-contractors
- The benefit to end client is estimated at 15% saving due to bypassing principal contracting charges and using AMC manufacturer's turnkey proposition
- Providing turnkey solutions also allows AMC manufacturers to control end to end quality and build process
- AMC manufacturers and principal contractors with AMC capability also looking into land development
  - Keepmoat is expanding their turnkey offering with a strategy of working with landowners to acquire and secure new sites across brownfield and greenfield locations. Acquiring both small and large-scale land developments
  - As the AMC landscape evolves and acknowledging some of the challenges entering the market, ilke Homes have set up their own land and development team as part of their strategy to move towards a full turnkey solution
- Opportunity remains for local developers as AMC is not cannibalizing Construction market
  - A further opportunity to provide a wider range of jobs in the region as AMC adds an additional requirement to the job market rather than cannibalizing existing labour within the construction sector
  - AMC projects can be deemed less attractive to traditional principal contractors as the existing highly fragmented sub-contracting model in traditional construction presents opportunity for margin to be made across large number of sub-contracting organisations. Same opportunity is reduced within AMC due to reduced number of sub-contracting organisations required on projects

Supply chain

The region has a strong supply base which can be developed to support AMC activity and other future opportunities both within the region and nationally.

The supply chain within the region is predominantly equipped to service the traditional construction sector. This includes a large base of consolidators and buffer services for commodity supplies (building materials and key components), however there are some strategic materials suppliers identified within research which support the AMC ecosystem. These strategic materials include steel frame structures and timber frames suppliers that play a key part in the AMC value chain.

Engagement sessions with Tier 1 AMC manufacturers have revealed that they interact with, and procure products from, organisations within the traditional construction supply chain; due to this being a reliable source of supply that has been established and built to service the wider construction sector. A key takeaway from the engagement sessions identified the fact that Tier 1 manufacturers were often procuring from national organisations with regional distribution centres and capabilities ensuring:

- Reduced risk due to reliability and continuity of supply
- Ability to handle large peaks and variations in demand brought by the intermittent nature of demand within project-based environments

The heatmap opposite identifies the current supply organisations within WMCA aligned with the ten types.

Figure 21
Heatmap of supply chain organisations

Strategic material suppliers (frames and wiring systems)

Steel frame – walls / ceilings / floors	Hadley Group	Kingspan (steel frames)	Frameclad	Superior Sections	Drywall Steel Sections	Met Structures	Albion Sections	Midland Erection	Midland Structures	Ash and Lacy
Wiring system and electrical components	Adren electrical services	West Midlands Electrics	CEL Electrical	Contact Electrical	RS Electrical Supplies					
Timber Frames & Structures	(SG) – Pasquill	(SG) – Roofspace Solutions	(WB) – Timber Innovations	Taylor Lane	(WB) – Timber Engineering	Lowfield Timber Frames	Skyline Timber Systems			

Project specific material suppliers (kitchens, bathrooms, etc.)

Kitchens	Symphony	Ideal Standard												
Bathroom – vanity units	Core Modular	Symphony	Ideal Standard	Kondor Pods	Walker Modular	Offsite solutions								
Doors and windows	Central RPL	DW Windows	West Midlands Double Glazing	Reliant Windows	Finesse Windows	Stedek Windows & Doors	Carera Windows Ltd	Diamond Windows Droitwich	Wombourne Windows	Hayley windows				
Brick slip / cladding	Eurocell	Rhino Steel Cladding	Ash and Lacy	Bushbury Cladding	Phoenix Steel	Johnsons Timber Supplies	Just Walls UK	Ketley Brick company	Brictec	Slips on Site Ltd	The Brickslip Brothers	SPV Group	NV Roofing	SB Roofing & Cladding
Plumbing, piping & water management systems	City Plumbing	BSS Group plc	Bes Ltd											
Walls / Panels / Insulation – SIPs	Kingspan	CCF	Falcon Panel Products	(SG) Glosford Sips	(WB) – Timber Innovations	Birmingham Asphalt	Superior Insulated Panels Ltd	Encon Insulation						
Roofing	(SG) – Pasquill	(SG) – Roofspace Solutions	Scotts Timber Engineering	(WB) – Smart Roof	Rinus Roofing	SIG Roofing								
Consolidation / buffer service (including commodity mat's suppliers)	(SG) – Jewson	(SG) Grahams	(SG) CTD Tiles	Wickes	Buildbase	Travis Perkins	Eurocell	Buildbase						
Specialist logistics / transport suppliers	WS Trans-portation	Midlands Portable Puildings	Marshals of Evesham	Modular Movements										

Specialist site services (Installers – subcontractors)

Manufacturing equipment Services	Mantech Manu-facturing	Eriks	Raybould Machining Tools	Mazak										
Structural engineering / consultancy	Arcadis	OES Consulting	BK Consultants	David Smith Associates	Harborne Building Consultancy	KWL Consulting	Simplify Structural Engineering	Brookbanks Consulting	Patrick Parsons	Adept Consulting	Integrated Designs & Associates	OES Consulting	PJ Barnett Associates	Glencross & Hudson
product and system design consultancy	Modularize	Arcadis	Eurobond	BSRIA	Mott Macdonald	Bryden Wood								
Configurator / BIM / IT systems suppliers	UK Con-struction online	Autodesk	Tekla	BIMobject	CoBuilder	Solibri								
Warranty / support suppliers	NHBC	Bopas												

WMCA
WMCA + 50 miles
National

Further observations on the supply chain include:

Large number of prospective AMC supply chain participants in WMCA

Eighty-six businesses identified within WMCA currently supply the construction sector and could contribute to the AMC supply chain.

These range from local SMEs to national organisations with regional distribution operations.

17
Strategic Material suppliers identified

8
consolidation and buffer services for commodity suppliers

41
project specific material suppliers

14
structural engineering/ consultancy providers

Business within WMCA currently supplying the AMC ecosystem

Saint Gobain, with their off-site solution division, presents an example of an organisation which could play a key role in the region's AMC supply chain with a multitude of off-site services within their offering. Two of their offsite manufacturing brands Pasquill and Roofspace Solutions have facilities within the region that deliver strategic components (roofing, whole timber house kits, steel frame solutions) to the AMC manufacturing sector. British Gypsum is also part of the group and work closely in partnership with Hadley Group to develop drywall construction solutions.

Saint Gobain has adopted a strategy of vertical integration and a product-based approach to their offsite services. While manufacturing 4,500 homes annually from their timber frame assembly, they also work with National Tier 1 AMC manufacturers as a supply chain partner providing products and components. This includes receiving housing designs or bills of materials from their partners and producing housing components and other components needed for offsite manufacture.

Opportunity to encourage growth of supply base to supply AMC industry around the region.

There is an opportunity for some of the current supply chain to diversify their offering and support the growing AMC capability and manufacturing operations within the region.

Engagement calls have confirmed that AMC manufacturers are promoting a strategy of local sourcing which would help promote the supply chain within WMCA and create an opportunity for the supply chain to develop further and support the requirements of more manufacturers, such as those situated around the M62 corridor.

One of the key focuses for local sourcing is within specialist site services which are subcontracted to local organisations and include groundwork, landscapers, site installations, external finishing, on site fit out and decoration which tend to be sourced within the region.

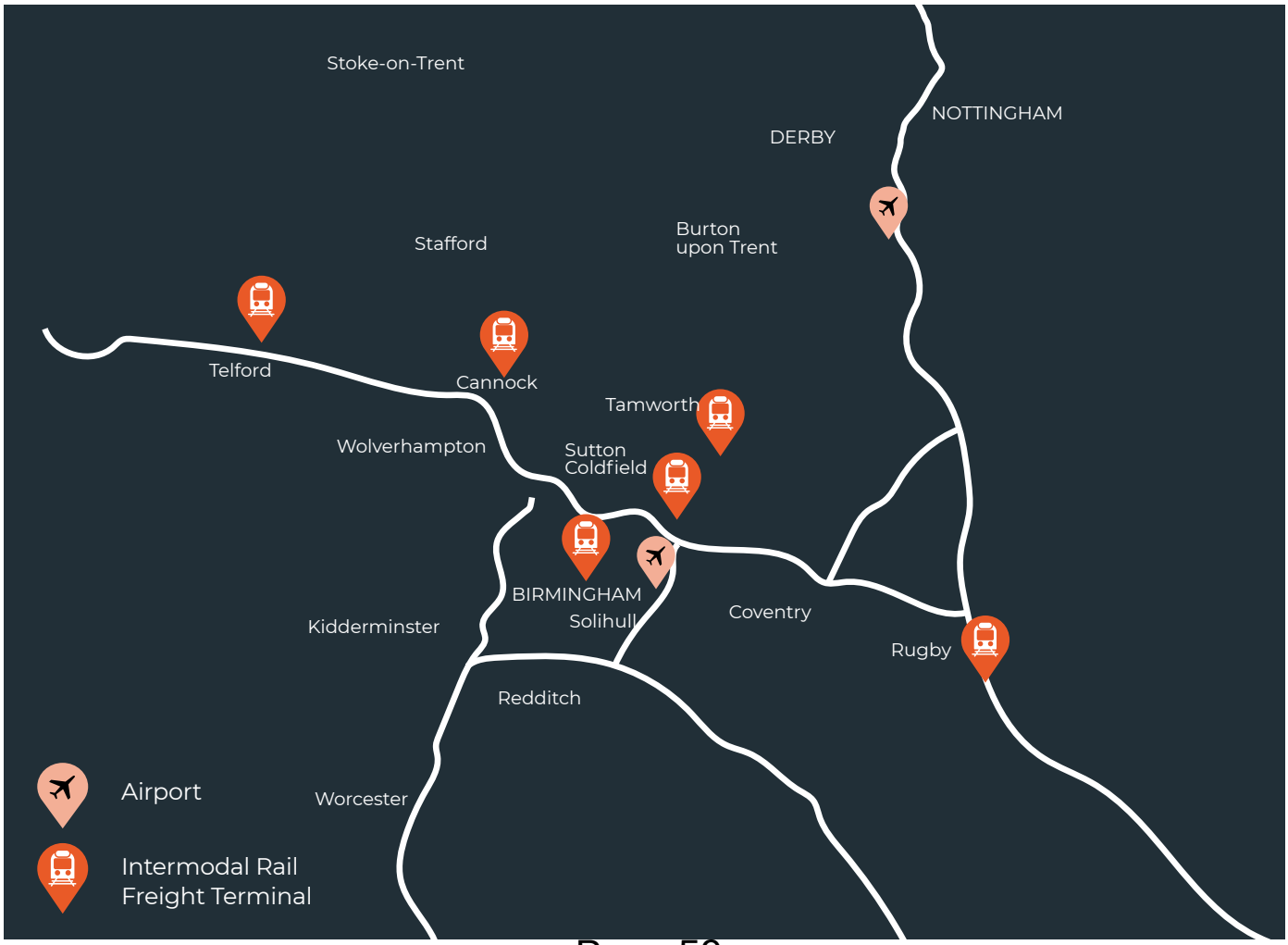
Enabling assets

Physical (road/infrastructure/land)

WMCA is uniquely positioned at the centre of a strong transport network. This physical infrastructure supports the opportunity for the region to promote itself as a pivotal hub for the AMC activity across the midlands and support the national AMC ecosystem. It also presents an opportunity to bid as a future site for a national construction logistics hub as Birch Coppice Business Park in Tamworth was considered previously.

- Physical location and surrounding infrastructure are key assets of the WMCA:
  - The network of key roads surrounding the region including the M6, M42, M40, M5 and M1 motorways provide a strong road network to allow efficient logistic operations. These roads connect the region to another corridor of AMC activity in the north across the M62 and provide a link to London, both locations within 3-4 hours' drive of Birmingham
  - This strong road network is supported by five intermodal freight terminals and two airports within a 30-mile radius around WMCA further displaying the regions connectivity
  - Alongside this strong logistics infrastructure, there are plans to develop the West Midlands Strategic Rail Freight interchange; a large development close to the M6/A5 intersection with more than seven million sqft of rail-served and rail-linked warehouses to support the regions logistics industry growth and help offer a more sustainable, efficient and reliable approach to logistics through rail freight

Figure 22
Key infrastructure assets around WMCA



Regulatory and political organisations

Across the WMCA and its constituent bodies there is a strong political ambition and range of policies to encourage growth, with key ambitions of investing in the local community and fulfilling the housing demand within the region.

- The AMC ecosystem could be a great way to fulfill the demand for housing (specifically affordable housing) and the opportunity to encourage and support local SMEs and other organisations to support this ecosystem

WMCA are encouraging growth within the AMC sector through a range of initiatives:

- WMCA plans to insist on the use of offsite construction on projects within the region. The speed of offsite delivery outweighs the potentially higher current cost of undertaking AMC methods compared to traditional construction. Some of these costs could be offset by funding mechanisms; grants and investments which WMCA are willing to offer to developers committed to AMC
- The strategic partnership with Urban Splash to build 10,000 new homes using AMC which aims to deliver circa 5% of the WMCAs target of 215,000 homes by 2031 demonstrates the region's progressive stance. Having delivered projects within the region at Fort Dunlop, Rotunda and currently working on site at the Port Loop, the collaboration between a local authorities and the private sector highlights an avenue which can be taken to enable AMC to service the demand for houses
- Furthermore in the past year WMCA and Lovell have agreed a further strategic partnership, for 4,000 homes over the coming eight years, and this will also promote the use of AMC
- The Advanced Manufacture in Construction (AMC) Expert Advisory Group which has been formed by the WMCA also identifies their commitment to the progression of the AMC agenda and its ability to help economic growth within the region; also providing a shorter term recovery strategy to offset the impacts of the coronavirus pandemic. This provides WMCA with an opportunity to capitalise on the current manufacturing and innovation capability within the region by establishing a platform to promote collaboration and utilise the expertise and innovation within the region to help develop and build AMC capability and best practice

Other institutions playing a key role in WMCA:

- Innovate UK plays a pivotal role in the sector regarding funding, facilitating collaboration and accelerating innovation. This enables organisations to carry out research, invest in pilot schemes and initiatives to improve their capability around AMC manufacturing
- Examples of manufacturers who have had assistance from Innovate UK in relation to funding projects include:
  - Hadley Group to help build a prototype of a modular home and access to the R&D tax credit system provided by Innovate UK
  - Totally Modular & TDS for a modular collaborative project

Benefits not considered under other categories

In dialogue with AMC manufacturers it appears that there is a mismatch between their expectations/requirements for investing in a new site with what local authorities are able to offer. Other enablers identified by stakeholders within the engagement calls to help support the growth of AMC operations and the supply of affordable homes within WMCA would include:

- Consistency and predictability of demand
- Regional demand aggregation
- Assurity of pipeline when considering investment within the region
- Collaboration between housing associations, councils and AMC ecosystem
- Early engagement in development cycle
- Governance and regulation regarding modular housing and lifetime cost
- Long term relationships with clients with open and honest dialogue.
- Encourage investment in digital capability in building design as it enables transparency of end to end process (material, product, and resource requirements)
- Housing authorities will need to implement a quota within developments making AMC mandatory to change behaviour. As cost tends to be key driver to shape behaviour currently and adoption of new modules and innovation

Innovation and R&D

WMCA is well established as a hub of innovation and research. The key institutions contributing to the West Midlands reputation globally include the heavy presence of manufacturers and research capability within the automotive sector and a multitude of academic institutions which engage in research within the manufacturing and built environment sectors.

Academic Research Institutions

Aston University
Birmingham City University
University of Birmingham
University of Warwick
Coventry University
University of Wolverhampton
Dudley College

West Midlands R&D Assets

Aston University Logistics Expertise
Birmingham Centre for Rail Research & Education
Centre of Excellence in Digital Systems
Energy Systems Catapult
High Temperature Research Centre
Manufacturing Technology Centre (MTC)
MIRA Technology Institute
MIRA Technology Park
National Automotive Innovation Centre (WMG)
National Transport Design Centre (NTDC)
Quinton Rail Technology Centre
Smart City Mobility Centre
TIC-IT (Horiba-MIRA)
UK Central
UK Mobility Data Institute (WMG)
UK Battery Industrialisation Centre (UKBIC)
Very Light Innovation Centre
Warwick Manufacturing Group (WMG)

Innovation and R&D Facilities

Coventry University Technology Park
University of Warwick Science Park
Warwick Innovation Centre
Wolverhampton Science Park
Innovation Birmingham Campus

With the strong research and innovation footprint within the WMCA, there is an opportunity for the AMC sector to utilise this capability; aligning current and future research to the needs of the sector and facilitating these institutions in conducting manufacturing and built environment research.

The region's wealth of academic institutions is a key facilitator. WMCA could draw on the academic institutions and their current research and projects to facilitate an AMC-focused coalition to assist the sector within the region and nationally:

University of Wolverhampton

AMC based research and projects with Tier 1 AMC manufacturers within the WMCA

- (Hadley Group) Researching into Ontology – Heating, lighting and cooling in housing
- (LoCaL Homes) Research into long term benefits to homeowners around energy efficiency and incorporating it into their housing design process and also the CHARM project into plastic free housing, which is considered to be a leading R&D project Europe-wide

Birmingham City University, School of Engineering and The Built Environment –

Currently undertaking research to improve the housing crisis by facilitating offsite construction & Design for Manufacture (DfMA). Aim to construct six DfMA houses with further 200+ new homes in the pipeline and assist choosing design options for 400 houses per annum.

University of Birmingham, Civil Engineering Research (Structural Engineering)

Current research includes studies in structured materials, structural insulated panels and structural component design, novel design methods using cold formed steel structures and off-site construction methods facilitated by new construction materials.

University of Warwick

Innovative manufacturing & future materials research into the decarbonisations of products, processes and operations on the house including battery technology research which could play a role in the environmental and sustainability aspects of affordable housing. Warwick Manufacturing Group (WMG) research includes sustainable materials and processes, materials engineering, and life cycle analysis and knowledge transfer partnerships with Tier 1 AMC manufacturers.

University of Coventry, Centre for Manufacturing and Materials Engineering

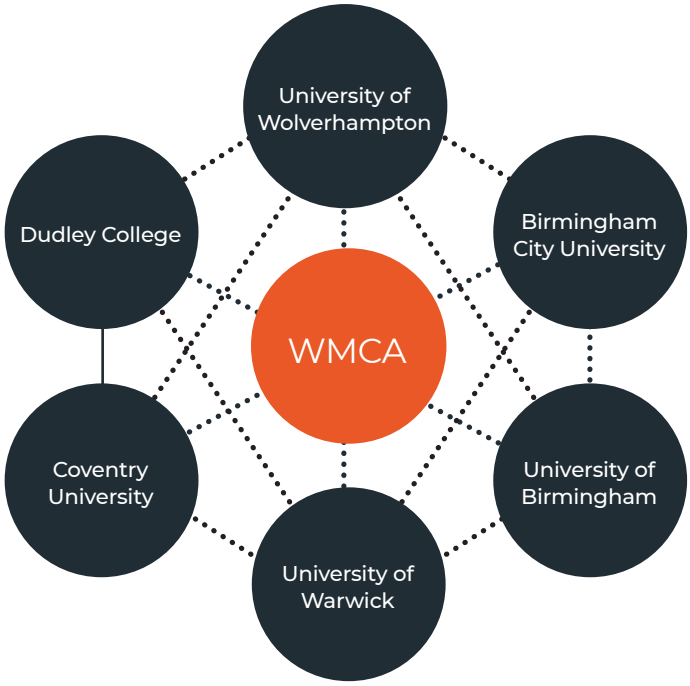
Offsite Wrap-around Large Scale retrofit (OWLS) is a project which aims to develop a rapid, highly replicable and innovative approach to external insulation of walls and roofs by applying modern methods of construction to retrofit. This research aims to benefit social housing projects through improvements to comfort, environmental improvements with the reduction of CO_2 and reduction in energy costs.

Dudley College

Dudley Advance II, a purpose-built facility geared towards providing apprenticeships, training and education for offsite manufacturing and digital skills including developing techniques such as BIM. Involved with multiple Tier 1 AMC manufacturers within the region and the Sustainable Housing Action Partnership (SHAP) assisting to push a smart, sustainable national housing infrastructure for 2050.

Figure 23

The academic institutions within the region which WMCA could utilise to assist their AMC initiatives and strategy



There is an opportunity to combine automotive manufacturing expertise and best practice with the AMC manufacturing landscape within the WMCA by:

- Marrying WMCA's strong foundation of automotive manufacturing knowledge to the research currently being undertaken across multiple academic and research bodies within the built environment and manufacturing sector. This presents an opportunity for West Midlands to align these expertise and research to help propel the AMC manufacturing sector within the region and nationally.
- Marrying the capability found in WMCA between the private institutions (manufacturers) and academic research would benefit organisations and the workforce within the sector as it would develop the manufacturing process, expertise, product knowledge and develop that skill set within the region.

The Manufacturing Technology Centre (MTC) also plays a key role in the research and innovation capability within the region. There is an opportunity to expand the MTC's collaboration with the Advanced Manufacturing Research Centre (AMRC) on initiatives and innovation relating to the AMC sector; enabling these institutions to utilize the synergies from their research, combining operational excellence from the automotive sector with manufacturing and materials-based research relative to the AMC ecosystem.

- Opportunity for West Midlands Innovation network with its focus on automotive and manufacturing process to collaborate with AMRC to utilise their expertise in AMC manufacturing and materials to benefit capability, skill sets and create synergies.
- Facilitate the connection between industry and academia within the region. Individual connections have been made between manufacturers and academic institutions in the shape of knowledge transfers and training schemes, but development of innovation and research which will introduce applicable innovation and improve manufacturing operations within the sector needs further encouragement.
- Use the strong research and expertise of the MTC, academic institutions and the private sector to understand *the art of the possible* in regard to building sustainable homes and help manufacturers to make incremental changes to their operations using an agile approach.

Case Study

Woden Road, Wolverhampton

This development at Woden Road in Wolverhampton is just one of many high-quality and highly-sustainable developments to have been manufactured and assembled by West Midlands based LoCaL Homes, part of the Accord Group.

Woden Road consists of 91 houses and 21 apartments, all of which were constructed using LoCaL's *Eco 200* system at its factory near Walsall before being assembled on site. The project achieved outstanding speed of delivery – with 86 of the homes built in 86 days – excellent environmental and energy performance, and fantastic value for money with all above ground works being completed for less than £1,000 per square metre.

Understanding the skills and training environment for AMC

In partnership with

HARLOW CONSULTING

Skills profile in the West Midlands Combined Authority

The WMCA Regional Skills Plan identifies a number of challenges as well as positive trends for the region from a labour market perspective:

- A low employment rate (70% of 16-64 year olds being employed)
- High levels of unemployment
- High numbers of residents with no qualifications
- A high number of residents in low paid jobs
- A quarter of vacancies described as 'hard to fill'

+ A growing number of jobs
+ Improvements in school attainment
+ Large and growing population of young people

Major new homes development (in the order of 12,000 new homes each years) presents just one of various opportunities to address the identified challenges.

Furthermore, sectors aligned with AMC such as advanced manufacturing, construction (building technologies) and digital creative have been highlighted by the WMCA as 'transformational'. Housing is one of the key priorities set out in the *Strategic Economic Plan*, with construction (building technologies) the key sector to deliver the Authority's £500m investment in this area.

The skills profile of AMC

Roles and functions involved in AMC

It should be noted that this section focuses on the core functions involved in the manufacturing and construction-related elements of AMC. This excludes other cross-sector roles and functions such as sales and marketing.

Offsite versus onsite

Firstly, there is a need to differentiate between offsite manufacture and onsite assembly and the functions that they each perform. From a skills perspective, this is important because 'construction' is tightly defined, based on the construction sectors 'in-scope' to the CITB Levy.[18] These sub-sectors range from traditional trades (e.g. bricklaying, carpentry, painting and decorating), to groundworks, drilling, scaffolding, to road building. Activities performed 'offsite' in a manufacturing facility are outwith this definition of construction.

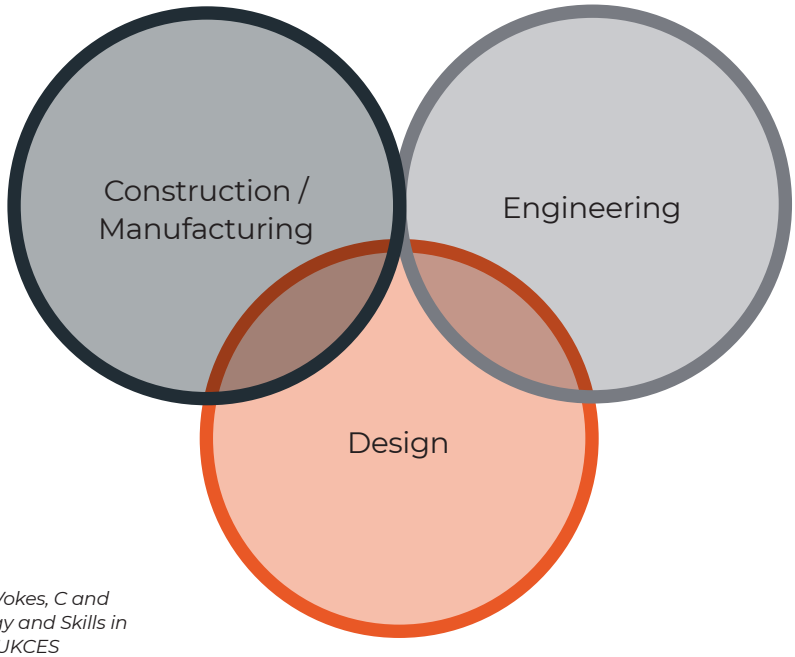
The interface between the onsite and offsite elements of AMC therefore sets a unique challenge in terms of skills integration. This is particularly true where 'traditional' companies, such as Tier 1 employers are adopting AMC techniques involving offsite manufacture.

The interface is where the build process becomes more closely assimilated with manufacturing, requiring integration between different disciplines (Figure 13).

As a consequence, AMC requires close collaboration and a mutual understanding between all parties involved in manufacture and assembly. Contractors undertaking placement and assembly need to work to tighter tolerances, work more productively and efficiency, have an appreciation of the manufacturing process and understand the difference between traditional and AMC builds. To achieve this, it is widely acknowledged that all parties need to be involved from the design stage.

> "Knowledge of the different disciplines is key. The challenge comes in the interdisciplinary nature of the profession."
>
> Feedback from stakeholder interview.

Figure 13
Integration between different AMC disciplines



Source: Reproduced from: Vokes, C and Brennan J (2013) 'Technology and Skills in the Construction Industry', UKCES

18 Based on the Industrial Training (Construction Board) Order 1964 (Amendment) Order 29912 ("Scope Order")

Functions and job roles involved in AMC

Due to the cross-fertilisation between AMC and traditional skills – i.e. the need for a mixture of innovative production techniques in the offsite manufacturing environment, as well as traditional skills required in onsite groundwork, assembly and finishing – there is a need to consider the functions performed by the different parties as well as the job roles. This is particularly the case where Tier 1 contractors have diversified into manufacturing. For clarity, and as an exemplar, Table 1 illustrates the core functions involved in AMC, and the associated job roles.

Table 1
Functions and job roles involved in AMC

Function	Description	Job role	
Digital design	Success of projects hinges on the right design	• 3D Visualiser • CAD Modeller • Architectural Technician • BIM Technician	• Pre-construction Designer • Electrical Engineer • Architect • Design Engineer • Structural Engineer
Estimating/ commercial	Seen as a 'black art' Getting it wrong can undermine benefits of using offsite	• Contracts Manager • Commercial Manager • Estimator • Quantity Surveyor	
Offsite manufacturing	Moving towards multi-skilled operatives however training is largely in silos Collaborative nature of offsite working requires cultural shift for traditional trades	• Wood Machinist • Multi-Skills Operative • Steel Fixer • Welding Fabricator • Trades (joiner/kitchen fitter)	• Factor Supervisor • Project Manager • Factory Manager • Plant Manager
Site management and integration	Sequencing and scheduling crucial for efficient on-site assembly Requires generic skillset in construction plus knowledge of materials and products	• Site Manager • Project Manager • Construction Manager	
Logistics	Critical function – requires key skills in supply chain management Training does not explicitly address interface between offsite and onsite	• Banksman/Signaller • Dispatch • Logistics/Plant Manager • Dispatch Manager • Transport Manager	
Onsite placement and assembly	Lack of precision can compromise the entire build To realise benefits of offsite, understanding is required of the offsite process and materials used	• Assembly Technician • Erectors (steel, precast concrete) • Operatives (groundworks, roofing) • Banksman/Signaller • Crane Operator • Forklift Driver	• Trades (plumber, painting, joiner) • Chargehand • Site Supervisor • Project Manager • Site Manager • Site Inspector

At the lower levels, job roles are unlikely to change, but those at the higher levels are predicted to evolve[19].

Academics consulted for this research suggest that, to realise an increase in AMC and to optimise production, the opportunities lies with manufacturers. As one academic stated: manufacturers already know how to produce, so to introduce a new business model might not be that difficult for them.

19 Vokes, C and Brennan J (2013) 'Technology and Skills in the Construction Industry', UKCES

Skills, knowledge and behaviours

UK-wide research with sector employers conducted in 2017 identified the common AMC-specific skills and knowledge needs of those working in the six core functions described on page 5. These needs relate predominantly to higher-level knowledge requirements concerned with realising the productivity benefits of AMC, as well as a wide range of soft skills and attributes (Table 2)[20].

Table 2
Common skills and knowledge needs

Knowledge needs	'Softer' skills needs
• Design codes and standards • Low carbon agenda • Materials suitability • Relevant products and systems • Lean methodologies • Offsite manufacturing processes • Current and emerging technologies (e.g. 3D printing) • Site specifics • Safe lifting and handling • Order or sequencing • Assembly processes and tolerances • Quality assurance processes and tests • Waste management	• Effective and ongoing communication • Problem-solving • Team-working • Attention to detail • Accuracy • Process improvement • Commercial awareness • Customer service • Business case for offsite • Negotiation • Adaptability • Resilience • Organisation

Those working in production roles need well-developed soft-skills equally as much as those working at higher levels. A key differentiator between construction and manufacturing, however, is that the latter relies on a relatively low-skilled or 'de-skilled' worker, heightening the need for those employed in production roles to possess appropriate behaviours and attitudinal characteristics.

"The skills of the person working on the building are the same as working on site, such as tiling. The mindset and work ethic is different to being on a construction site. That's what's most important."

Feedback from stakeholder interview.

Stakeholders consulted for this research identified the following as key skills needs for the future:

- Digital (specifically Virtual Reality and Augmented Reality)
- Robotics
- Analytics

20 Brennan, J and Vokes, C (2017) 'Faster, Smarter, More Efficient: Building Skills for Offsite Construction', CITB

Supply of AMC qualifications and training

Higher Education and academia

The Register of English Higher Education Providers[21] lists 21 providers of higher education programmes in the West Midlands Combined Authority area (Table 6). Some of these providers – such as colleges – offer 'franchised' provision on behalf of a university, sometimes acting as an additional campus. These providers deliver the programmes, which are then awarded and accredited by the respective university.

Three Universities and one Further Education College within the WMCA offer higher education provision related to advanced manufacturing in construction.

Birmingham City University

The University offers 27 courses related to construction and the built environment ranging from Architectural Technology, to Architecture, Building Services Engineering, Building Surveying and Design Management.

Of particular note is 'BA (Hons) Design for Future Living' created in partnership with MOBIE, which aims to develop innovative design thinking which 'prepares a new model of creative, skilled and disruptive designer with knowledge of home, digital technologies and creative design'. The programme aims to offer pathways into employment in a range of areas including design, delivery (e.g. prefabrication, offsite manufacturing) and development.[22]

The course is in its final stages of approval and is accepting its first cohort of applications for a course start date of September 2020.

Aside from the Design for Future Living programme, AMC is incorporated into the content of Masters level courses including Quantity Surveying, Construction Project Management, Planning and Civil Engineering. There is specific coverage in the MSc in Construction Project Management by way of a module entitled 'Integrated project delivery' which covers aspects such as lean concepts and advanced methods of construction.

At the School of Engineering and the Built Environment Dr Franco Cheung is leading a project which aims to *"create a knowledge-based engineering system that allows forecasting and easy planning of DfMA houses"*. The team is working with a major housing association – whg – which is looking to increase its housing stock from 250 new homes a year to 400 new homes a year through the adoption of DfMA[23].
Dr Cheung estimates that an investment of £2m would allow them to scale up the model; they are also currently developing a distribution model of factories that can be replicated in a local area (to reduce logistics).

21 The Register lists all the higher education providers officially recognised by the Office for Students (OfS): https://www.officeforstudents.org.uk/advice-and-guidance/the-register
22 Birmingham City University, Design For Future Living – BA (Hons): https://www.bcu.ac.uk/courses/design-for-future-living-ba-hons-2020-21
23 Birmingham City University, 'Improving the housing crisis by factory-based construction': https://www.bcu.ac.uk/built-environment/research/transforming-building-life-cycle/research-projects/transforming-house-construction-using-design-for-manufacture-and-assembly

Coventry University

Coventry University is home to two research centres focused on the built environment:

- **Built and Natural Environment**
  With an emphasis on design, research areas include the dynamic performance of buildings; occupant and owner response; whole-life decision making; monitoring buildings.[24]

- **Future Transport and Cities**
  Which brings together expertise in art and design; human factors; engineering; manufacturing; computer systems and business studies.[25]

Also of relevance is the centre for 'Manufacturing and Materials Engineering Research'[26] which integrates with the Institute for Advanced Manufacturing and Engineering (the University's collaboration with Unipart Manufacturing). Areas of expertise comprise – amongst other things – supply chain management, process control and materials for advanced technologies. Although the courses offered[27] at the Institute do not include coverage of advanced manufacturing in construction they do cover generic skills areas of relevance, such as engineering material and manufacturing technology a part-assembly manufacturing project, design and computer aided manufacturing and design principles for manufacturing; lean and agile operations, CAD, automation and robotics.

The Centre is currently working on a couple of areas they consider relevant to AMC:

- Fibre composites (a replacement for asbestos)
- 3D printing

Wolverhampton University

The School of Architecture & the Built Environment offers HNCs, HNDs and undergraduate degrees in various disciplines from architecture and civil engineering to construction management, building surveying and quantity surveying. The school also hosts a BIM studio (formerly the Virtual Design Enterprise Centre (ViDEC)) delivering CAD and technology training to industry.[28] Modules on AMC have been introduced in Quantity Surveying and Construction Management undergraduate programmes.

The University offers its most AMC-specific provision at postgraduate level, for example:

- MSc Offsite Housing Construction
- MSc Building Information Modelling for Integrated Construction
- Postgraduate Certificate Building Information Modelling
- MSc Construction Project Management
- Postgraduate Certificate Construction Project Management

The MSc Offsite Housing Construction, developed in partnership with MOBIE and launched in January 2020, currently has a cohort of three leaners, one of whom is based abroad. The distance learning approach to delivery means the programme has a truly international market.

Dudley College of Technology

Although the College currently has limited HE provision – a Construction HNC – it is looking to expand its offer. The College enjoys a partnership with the Sheffield-based Advanced Manufacturing Research Centre (AMRC) and the Manufacturing Technology Centre (MTC), based in Coventry and is currently working on the development of a Higher Education Centre with Wolverhampton University. The Centre is intending to focus on three areas: Advanced Manufacturing; Medical Engineering, and; Modern Methods of Construction.

24 https://www.coventry.ac.uk/research/areas-of-research/built-and-natural-environment/
25 https://www.coventry.ac.uk/research/areas-of-research/institute-for-future-transport-and-cities/welcome-to-the-institute-for-future-transport-and-cities/
26 https://www.coventry.ac.uk/research/areas-of-research/manufacturing-materials-engineering/manufacturing-materials-engineering-research/
27 Manufacturing Engineering MEng/BEng (Hons) and Production Engineering & Operations Management MSc
28 University of Wolverhampton, School of Architecture and the Built Environment: https://www.wlv.ac.uk/schools-and-institutes/faculty-of-science-architecture-and-agriculture/school-of-architecture-and-built-environment/undergraduate-courses/

The Manufacturing Technology Centre (MTC)

The MTC was established in 2010 as an independent research and technology organisation (RTO) to bridge the gap between industry and academia. Currently the Centre operates across nine markets, which includes Construction & Infrastructure. Since 2015, the MTC has been home to a training centre, offering the Advanced Level 4 Engineering Manufacturing Technician Apprenticeship and a degree apprenticeship (Management of Manufacturing MBA) with Aston University. The centre also offers short courses is areas such as additive manufacture, laser processing, project management and transferable skills such as recruitment management, finance and leadership.

The MTC is a key partner in the Construction Innovation Hub[29] which has recently developed a series of upskilling programmes pitched at Masters level such as an online course in DfMA and Quality Management for Construction. The Hub worked with BRE in developing the content and has an audience of approximately 2,000 companies of all sizes (although mainly large).

Although not originally funded for delivering training, the Hub is considering looking at skills gaps in the industry: mapping what's available and what's needed. This work would potentially focus on three areas: offsite and onsite assistive technology; design; management.

Further Education learning aims

This section focuses on the supply of post-16 qualifications and training available, the analysis has been divided into nationally regulated qualifications offered by Further Education institutions (e.g. Colleges and private providers) and non-regulated training, such as short courses and online modules.

There is a distinct lack of AMC-specific training provision in terms of regulated qualifications.

Ofqual's register contains 83 qualifications with potential relevance to AMC,[30] identified by mapping qualification titles (using existing knowledge of their broad content) to the six main AMC functions, and associated job roles (Table 7).

The mapping focused on level 3+ qualifications because we know from manufacturers that they tend to recruit low-skilled workers for factory floor operations and train them up in-house. Furthermore, existing construction-related qualifications at levels 1 and 2 focus mainly on trade and craft roles (e.g. bricklaying, carpentry and joinery). These qualifications are therefore not directly relevant to AMC-specific roles although, depending on the type of assembly, some of these trades will be used on site for interior fit out and finishing. The long-list of qualifications is available in the appendix.

The BTEC Level 3 Diplomas in Construction and the Built Environment offer a potential route into, and coverage of, AMC. Mandatory units include: sustainable construction, construction technology and design and building technology. Optional units allow the learner to follow a particular route such as surveying, planning, or civil engineering.

- Due to the unitised structure of many level 3+ qualifications, there is limited flexibility for providers to modify content and delivery. Without changes to the content and structure of the units, there is little opportunity to add or increase knowledge or skills development around AMC into these qualifications. Any changes would need to be made by the respective awarding organisation
- Lower level (e.g. level 1 and 2) offer most flexibility for introducing content for AMC because – according to providers – the content is more loosely specified. However, qualifications at this level do not appear to be in demand from AMC employers – specifically manufacturers – because these companies require low-skilled workers who they can train up in-house
- Two AMC-related Level 2 learning aims have been withdrawn,
  - Level 2 NVQ Certificate in Innovative/ Modern Methods of Construction - Cold Formed Steel Frame (Assembly) (QCF)
  - Level 2 NVQ Diploma in Innovative/ Modern Methods of Construction (QCF)

These awards do not appear to have been replaced, confirming the lack of demand for lower level provision for AMC.

29 The CIH is a partnership between MTC, BRE and the Centre for Digital Built Britain (CDBB).
30 This is from a total of 976 'currently offered' qualifications for the Sector Subject Area of 'building and construction'.

Further Education provision in the WMCA

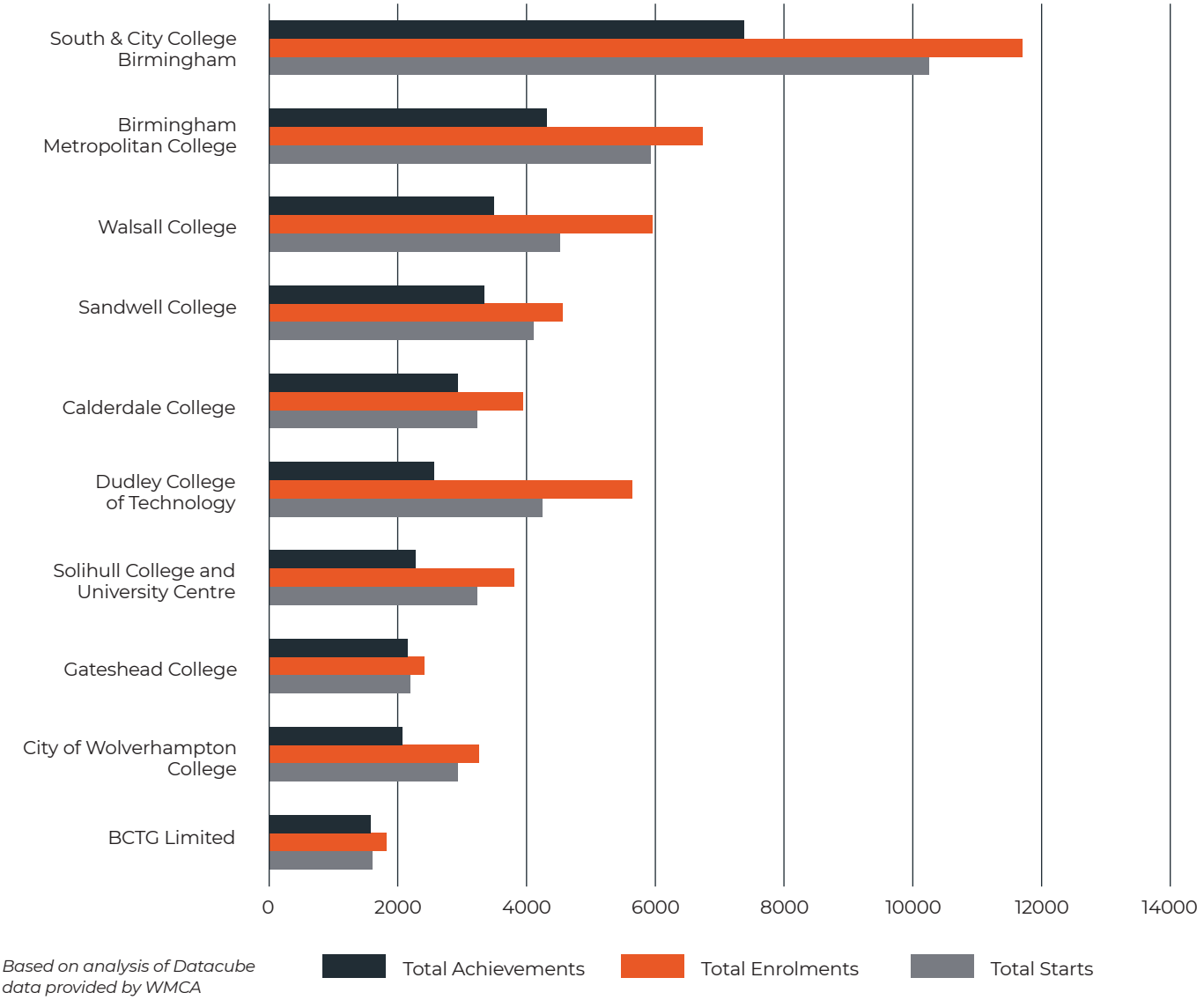
These findings are based on analysis of Datacube data.

Travel to learn distances for relevant qualifications tend to be short. Most learners remain within the WMCA.

South & City College Birmingham provides the highest number of construction-related learning aims to learners resident in the WMCA (Figure 2), ranging from level 1 and 2 trade and craft courses, level 3 BTEC Diplomas, HNC and HNDs in Construction and the Built Environment. Birmingham Metropolitan College's offer is focused on trade and craft courses at levels 1-3 only (Figure 2).

Nine out of the 10 providers are colleges with the only private provider – BCTG, based in Oldbury – specialising in the provision of apprenticeships and 19+adult skills, including pre-employment courses.

Figure 14
Top 10 providers of Learning Aim Sector Subject Area Tier 2 to learners in the WMCA, by total achievements 2016/17 to 2018/19



Based on analysis of Datacube data provided by WMCA

Dudley College of Technology

Although Dudley College is sixth on the list, it offers the most relevant provision needed for AMC at a number of specialist facilities:

- **Dudley Advance** offers full-time and part-time courses linked to traditional processes and emerging technologies in the engineering and manufacturing sectors.
- **Dudley Advance II** has been created in partnership with leading construction companies; it offers apprenticeships in new and traditional trades as well as professional upskilling in areas such as BIM.
- **Advance Technical Engineering and Construction Centre**, based in London, offers niche training in modern building technologies and construction trades.
- **Construction Apprenticeship Training (CAT) Centre** offers facilities for traditional construction trades as well as modern technical and digital-focused skills.

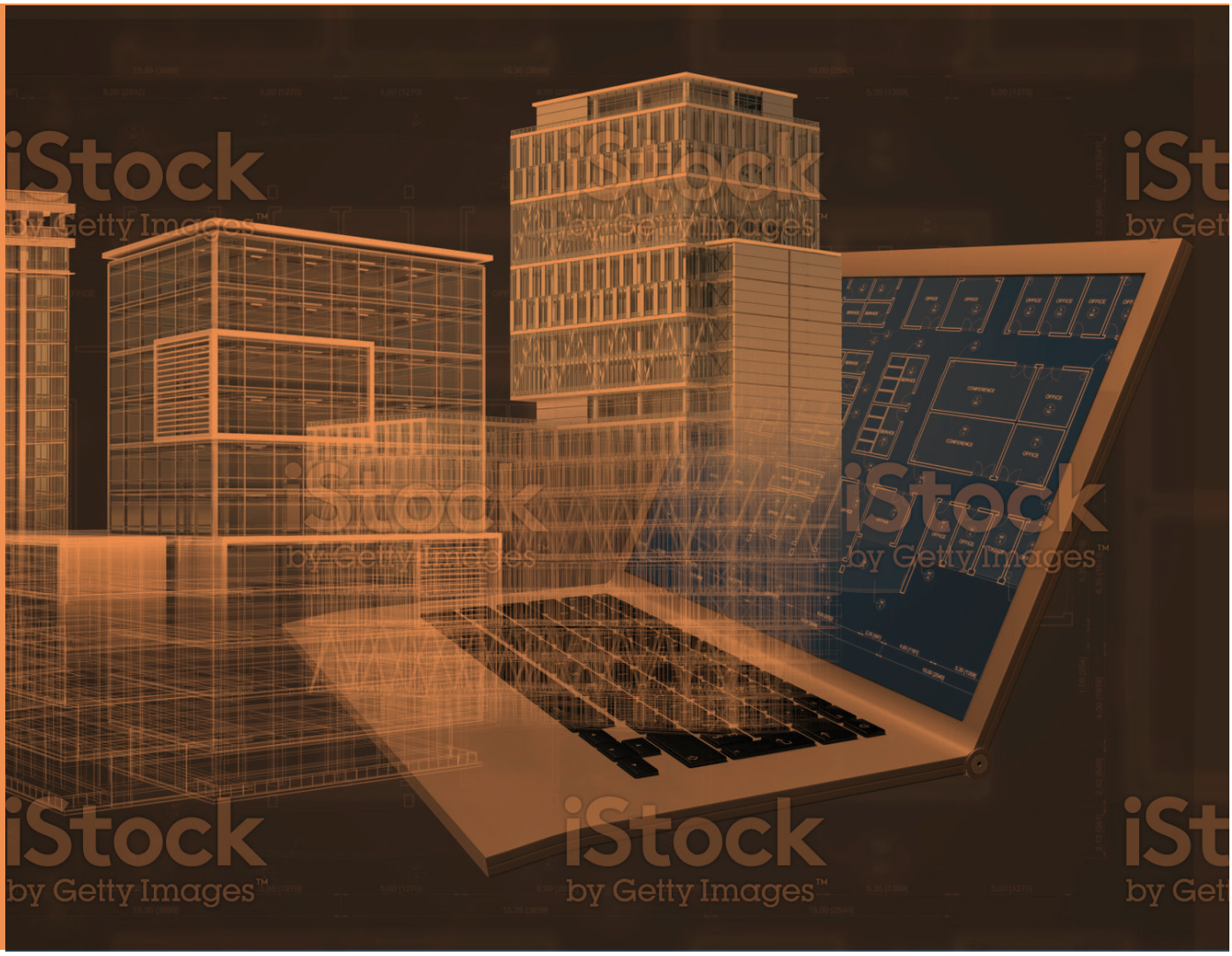
Overview of all SSA Tier 2 learning aims

Of the almost 600 learning aims in Sector Subject Area Tier 2 undertaken by learners resident in the WMCA, the most popular are level 1 and 2 aims – particularly non-regulated provision (Figure 15). The most popular aim – the Level 1 BTEC Certificate in Construction – had 1,072 achievements in the three years 2016/17 to 2018/19, with the QCF predecessor qualification having 825 in 2016/17 alone.[31]

Three of the top 20 most popular learning aims are qualification units:

- Level 2 Preparing for manufacturing operations (9 credits)
- Level 2 Conducting manufacturing operations (9 credits)
- Level 2 Promoting effective working relationships (5 credits)

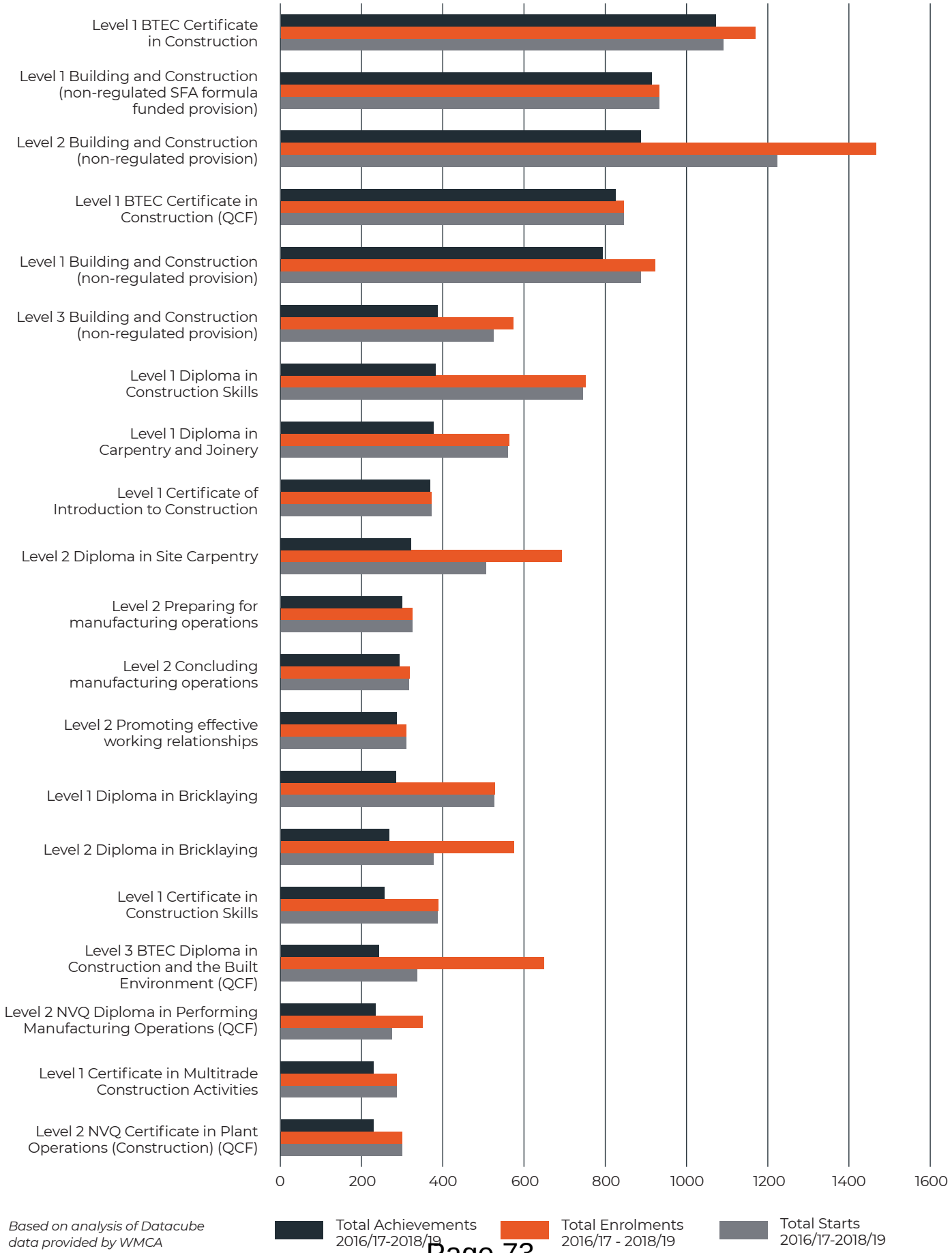
All of these units are components of the Level 2 NVQ Diploma in Performing Manufacturing Operations.



31 No starts, enrolments or achievements were recorded in 2017/18 or 2018/19.

Figure 15

Top 20 Learning Aim Sector Subject Area Tier 2 taken by learners in the WMCA (2016/17 to 2018/19)



Based on analysis of Datacube data provided by WMCA

Potentially AMC-relevant learning aims (Level 3+)

Of the 83 learning aims identified as being 'in-scope' to this study, 29 have been undertaken in the last three years by learners residing in the WMCA. Table 3 lists these aims, showing the number of achievements in the period 2016/17-2018/19; those with '0' achievements had learner starts or enrolments.

Table 3

AMC-relevant qualifications taken by learners resident in the WMCA (2016/17 - 2018/19)

Learning Aim Title	Level	Total starts 2016/17-2018/19	Total enrolments 2016/17-2018/19	Total achievements 2016/17-2018/19
BTEC 90-credit Diploma in Construction and the Built Environment (QCF)	Level 3	159	160	101
BTEC Certificate in Construction and the Built Environment (QCF)	Level 3	6	6	1
BTEC Diploma in Construction and the Built Environment (QCF)	Level 3	337	649	242
BTEC Extended Diploma in Construction and the Built Environment (QCF)	Level 3	261	344	136
BTEC Higher National Certificate in Construction and the Built Environment	Level 4 (original)	168	229	35
BTEC Higher National Diploma in Construction and the Built Environment	Level 4 (original)	27	40	12
BTEC HND Diploma in Construction and the Built Environment (QCF)	Level 4 (original)	32	45	12
BTEC National Diploma in Construction and the Built Environment	Level 3	16	16	2
BTEC National Extended Certificate in Construction and the Built Environment	Level 3	11	11	7
BTEC National Foundation Diploma in Construction and the Built Environment	Level 3	1	1	1
BTEC Subsidiary Diploma in Construction and the Built Environment (QCF)	Level 3	37	41	25
Diploma in Insulation and Building Treatments (QCF)	Level 3	7	7	7
Higher National Certificate in Construction	Level 4 (original)	29	29	0
Higher National Diploma in Construction	Level 5 (original)	5	5	0
NVQ Diploma in Accessing Operations and Rigging (Construction)	Level 3	3	3	0

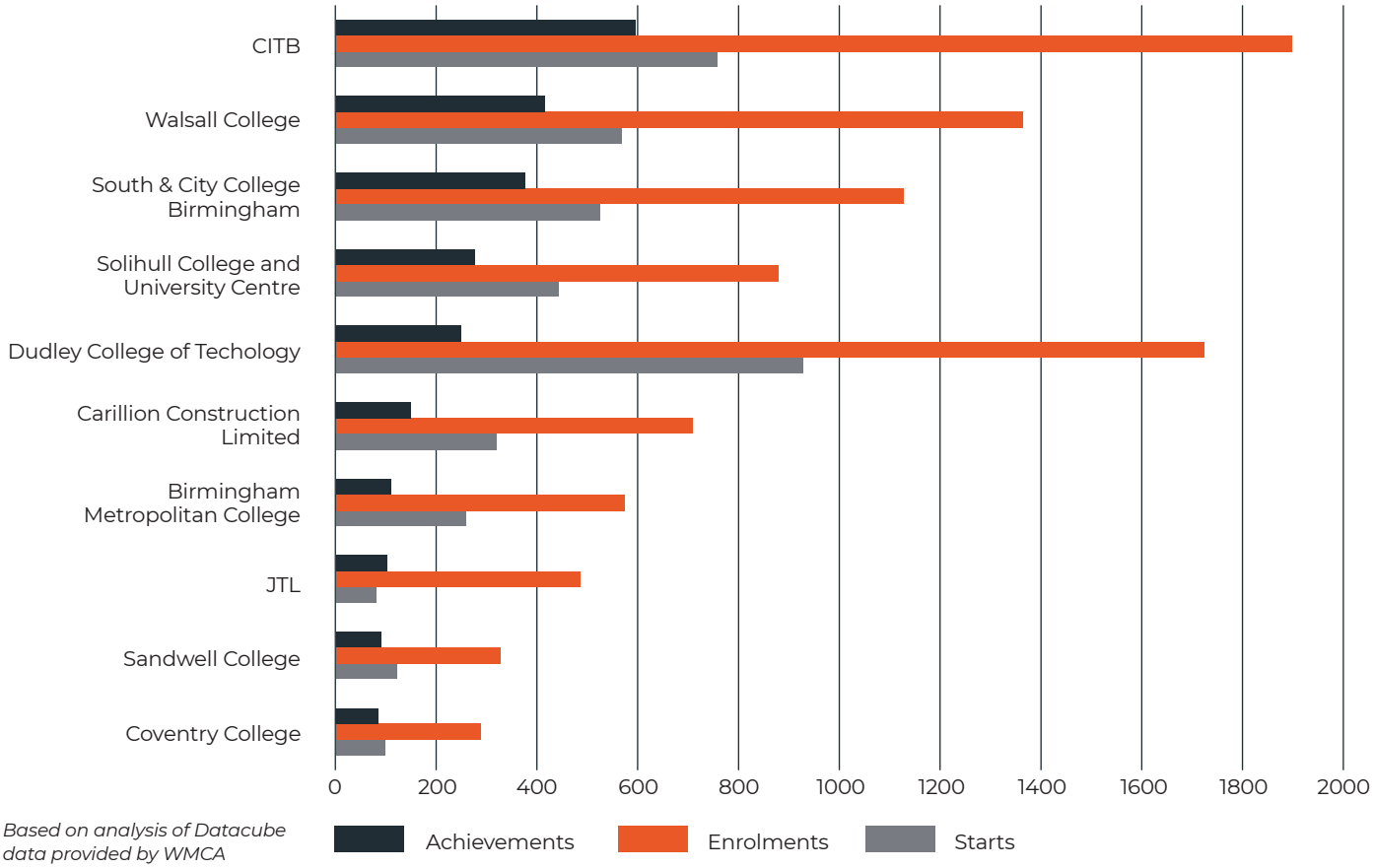
Learning Aim Title	Level	Total starts 2016/17-2018/19	Total enrolments 2016/17-2018/19	Total achievements 2016/17-2018/19
NVQ Diploma in Built Environment Design	Level 3	26	38	1
NVQ Diploma in Built Environment Design (QCF)	Level 3	5	5	0
NVQ Diploma in Cladding Occupations (Construction)	Level 3	10	13	10
NVQ Diploma in Construction Contracting Operations	Level 3	60	161	60
NVQ Diploma in Construction Contracting Operations (QCF)	Level 3	26	85	23
NVQ Diploma in Construction Management (Sustainability)	Level 4 (original)	26	40	6
NVQ Diploma in Construction Site Management (Construction)	Level 4 (original)	0	2	2
NVQ Diploma in Construction Site Management (Construction) (QCF)	Level 4 (original)	2	2	0
NVQ Diploma in Construction Site Supervision (Construction)	Level 4 (original)	30	52	5
NVQ Diploma in Construction Site Supervision (Construction) (QCF)	Level 4 (original)	5	5	1
NVQ Diploma in Occupational Work Supervision (Construction)	Level 3	231	285	172
NVQ Diploma in Occupational Work Supervision (Construction) (QCF)	Level 3	20	53	16
NVQ Diploma in Surveying, Property and Maintenance	Level 3	9	14	1
NVQ Diploma in Surveying, Property and Maintenance (QCF)	Level 3	2	3	1
Total		1551	2344	879

Apprenticeships

Profile of construction apprenticeship providers in the West Midlands

The largest provider of construction-related apprenticeships to learners resident in the WMCA is CITB at Levels 2 to 4+ (594 achievements between 2016/17 and 2018/19), followed by Walsall College (414 achievements) and South & City College Birmingham (375 achievements) (Figure 16).

Figure 16
Top 10 providers of apprenticeships to learners resident in the WMCA (2016/17 to 2018/19)



Based on analysis of Datacube data provided by WMCA

Anecdotally, we have been made aware that the main digital-focused programme of relevance to AMC is the Level 3 Digital Engineering Technician standard. It covers subjects such as virtualisation and simulation of design, construction and management of assets; digital measurement; integration of construction data and information.[32]

The only provider currently offering this Standard in the WMCA is Dudley College, with the fist cohort of apprentices in 2017/18 numbering 12 starts; this increased to 30 in 2018/19. When learning at the college, Apprentices stay at a residential block on campus. Eight of the current apprentices are employed by a large housebuilder.

Looking ahead to future developments, Wolverhampton University is working with MOBIE to develop a postgraduate apprenticeship – an MSc in Offsite Construction. We understand it was felt by the Trailblazer group that postgrad is the most appropriate level of demand as it allows for the accommodation of students from different backgrounds and disciplines. Mark Farmer will be the chair with involvement from MOBIE, Wolverhampton Uni, Urban Splash and others.

32 Digital Engineering Technician: https://www.instituteforapprenticeships.org/apprenticeship-standards/digital-engineering-technician/

T Levels

From September 2020, T Levels will be taught for the first time in England.

The programmes will be offered to young people as an alternative to A levels and incorporate a three-month industry placement. Released in waves, two of the first T Levels for delivery will be in Design, Surveying and Planning for Construction and Digital Production, Design and Development. Stakeholders consulted for this research reported that there is minimal content on AMC within the new construction T Level. A review of the outline content revealed there is only one learning outcome on AMC: 'Construction methods, including traditional and modern methods, e.g. on and off-site construction and robotics'.[33]

Table 4 shows which Colleges in the West Midlands will be offering the construction route.

Table 4
Construction T Level providers in the West Midlands

T Level Provider	2020/21	2021/22	2022/23
Dudley College of Technology	X	X	X
Herefordshire, Ludlow and North Shropshire College		X	X
North Warwickshire and South Leicestershire College			X
Sandwell College		X	X
South & City College Birmingham			X
Thomas Telford UTC (formerly West Midlands UTC)		X	X
Walsall College	X	X	X
Warwickshire College Group			X

Source: DfE, T Level Provider List Final 22 July 2020

33 DfE (2018) 'Construction: Design, Surveying and Planning, T Level outline content: final version for inclusion in ITT'

Informal provision

Informal training (e.g. online modules) relevant to AMC focuses on 'awareness-raising' and/or has a purpose of increasing knowledge and best practice. Examples of sources of online training are listed in Table 5.

The uptake of this type of training is not known, neither are the courses easy to find. For example, none of the training listed above was readily detectable via internet searches using key words such as 'modern methods of construction training', 'modern methods of construction learning', or 'modern methods of construction courses'.

Table 5
Examples of online training for AMC

Supply Chain Sustainability School	Self-assessments, toolbox talks and learning resources covering: • Sustainability • Lean construction • Management • BIM • Offsite
Offsite Ready/Construction Scotland Innovation Centre	Online learning materials and face-to-face events covering: • Offsite fundamentals • Digital design • Estimating/commercial • Logistics • Offsite manufacture • Onsite placement and assembly • Management and integration The website also includes a 'teaching support system' to aid the integration of Offsite Ready content into existing curricula.

Drivers and barriers for AMC skills and training

Drivers for AMC skills and training

Policy

- In the 2018 Construction Sector Deal the UK Government committed to "establish a technical education system that rivals the best in the world to stand alongside our higher education system" as well as investing in maths, digital and technical education to address a shortage of STEM skills. This included increasing apprenticeships to 25,000 a year by 2020 and to increase the number of approved apprenticeship standards as well as increasing diversity of the sector in terms of gender, ethnicity and disability. A key action is to:

> "Develop programmes to retrain the workforce with the skills to support the future industry needs to embed and maximise the use of digital technologies and modern methods of construction".[34]

- An increase in AMC growth in the WMCA would respond to this ambition of improving diversity in the sector. Due to manufacturers' requirement for low- or de-skilled workers in the production environment, they are more likely to recruit from a different labour pool than for traditional trades. This labour pool can include ex-offenders, school leavers and ex-military.

Environmental and sustainability

- There is a need for upskilling in the areas of specification and installation of environmental technologies. The Committee on Climate Change (CCC) has identified substantial skills gaps in housing design, construction and in the installation of new energy efficiency measures.[35] The development of AMC provides an opportunity to help address these skills gaps and more generally respond to the low carbon agenda through better quality, more efficient housing.

Technology

- Since the UK Government published its BIM strategy in 2011, Cabinet Office and the former BIS have been working to implement "a long term programme to embed the use of BIM across centrally procured public construction projects". The government Construction Strategy committed to using Level 2 BIM to deliver publicly funded project which was mandated in the same year.[36] In 2012, the UK Government went further, committing to develop capability in BIM-enabled design for manufacture and assembly (DFMA) and lean construction process.[37]
- The government reaffirmed its commitment to AMC by recommending that government "ensure skills programmes, apprenticeship schemes and the new T Level give learners the skills they need for both traditional techniques and MMC and encourages more young people into the sector". However, the new T levels in construction contain very little content on content on AMC.

Demographic change

- The Independent Review of Build out Rates found that, whilst "availability and price of labour was a significant concern for the major house builders", transferability of skills between certain on-site trades means that labour could be drawn from other construction sectors (and potentially other industries) to meet an increase in demand for trade skills.[38] Consultation with stakeholders for this research suggested that, in the context of offsite, the flow of labour would only be appropriate for the transfer of traditional skills into the offsite manufacture and assembly environment. They suggested that skills leant in the production environment could not easily be transferred into onsite roles.
- This may translate to a need for cross-skilling or up-skilling, potentially in the form of bite-sized training, possibly individual units.
- Stakeholders tend to agree that demands for professional and technical skills will increase, particularly in data use/analytics, VR/AR and robotics.
- This requirement may be exacerbated by a current shortfall in technician-level and management skills. For example, various stakeholders highlight an existing skills gap around the use of BIM.
- At the lower levels, job roles are unlikely to develop, particularly in the manufacturing environment. Therefore, the current low, or no demand for low level qualifications and training is unlikely to change.

34 HM Government (2018) 'Industrial Strategy, Construction Sector Deal'
35 Committee on Climate Change (2019) UK housing: Fit for the future?
36 HM Government (2018) 'Industrial Strategy, Construction Sector Deal'
37 HM Government (2012) 'Industrial strategy: government and industry in partnership, Building Information Modelling'
38 Rt Hon Sir Oliver Letwin MP (2018) 'Independent review of build out: final report, Ministry of Housing, Communities and Local Government

Barriers to AMC skills and training

- Stakeholders confirm that there is currently very little demand for AMC-specific competency-based training or qualifications, however, future demand is likely to be for digital skills, particularly in terms of data use.
- Despite potential demand for higher level design qualifications, specifically around BIM, regulated qualifications are not currently offered to, nor taken-up by, learners in the WMCA. Demand appears to be for short, upskilling courses and for higher level (level 6/7) provision.
- Short, bespoke courses can be more attractive to employers because they only require workers to be away from the workplace for a small about of time. Funded provision of small units may well be attractive to employers for upskilling; this could also be considered as a 'bolt-on' to existing construction/manufacturing-related courses to improve knowledge of and upskill those entering the labour market.
- There is a distinct lack of AMC-relevant provision available for the post-16 market at Level 3+. Of over 1,000 qualifications available nationally for delivery, only 83 are of potential relevance to AMC. However, there are positive developments in the apprenticeship market with the introduction of the Level 3 Digital Engineering Technician and the Level 2 Construction Assembly and Installation Operative and the proposed postgraduate level degree apprenticeship.
- Academics confirm there is an opportunity to embed AMC content into degree programmes; indeed there are examples of this happening in practice in construction management and quantity surveying courses. However, there is an apparent challenge in incorporating AMC into architecture programmes because of the rigidity of the RIBA validation criteria.
- Further Education providers face substantial challenges in attracting and retaining appropriately skilled tutors and assessors for higher level professions – e.g. Civil Engineering, Structural Design, Town Planning, Advanced Manufacturing – because FE is unable to compete with wages paid in industry. There are examples of providers paying industry professionals on a consultancy basis to support delivery.

Case Study

West Midlands Combined Authority & Urban Splash: A memorandum of understanding

WMCA and Urban Splash have established a long-term partnership commitment, which is codified in a Memorandum of Understanding (MOU) and which supports the ambition for House by Urban Splash to deliver 10,000 homes by 2031 - 5% of the WMCA overall housing target, including on the *Port Loop* urban regeneration masterplan, pictured.

The MOU sets out *House by Urban Splash's* commitment to AMC as a default construction approach. *House by Urban Splash* has made significant investment into AMC since 2012, including establishing a factory in Alfreton, East Midlands. The MOU and the developments it will lead to are evidence that the vision of this Roadmap is already translating into real, practical delivery.

image credit and copyright Urban Splash

Building on the West Midlands' unique strengths

The WM is uniquely well placed to take a leading role in the introduction of pre-manufacture, and especially advanced manufacture, into the construction sector.

The strengths and opportunities set out opposite provide the region with an excellent foundation on which to build its roadmap for the next decade of AMC investment.

WM economy and construction sector

a. WM has a high value construction sector relative to comparator regions, employing 55,000 people across 10,300 businesses.

b. There are signs of an advanced manufacture cluster forming in the region, particularly in the Black Country – there are already 58,000 jobs across 1,900 businesses and this has the potential to drive upstream activity for AMC.

c. WM has a notable concentration of AMC-related activities – 44 companies in a range of sectors including renewables, sustainability, logistics and supply chain, represents a concentration of nearly three times the national average.

AMC sector

a. WM is one of the key hubs of AMC nationally, underpinned by strong advanced manufacture capability and transport infrastructure.

b. Nine Tier 1 AMC residential manufacturers are located within the region, and are committed to capacity building within the local supply chain.

c. There is already a strong supply chain which could be equipped to diversify its offering to support growing AMC capability and capacity.

d. There is an opportunity is to develop the AMC sector as a nationally leading "vanguard" to bring together manufacturing and construction and also to balance negative structural changes in other sectors such as automotive.

Policy environment

a. WMCA has signalled support for AMC through a commitment to deliver at least 20% AMC on any site funded by the strategic commissioning fund of 200 homes or more.

b. Nationally significant partnership commitment to deliver 10,000 AMC homes with national developer/manufacturer Urban Splash.

R&D, skills and qualifications

a. WM is home to a uniquely relevant collection of R&D and HEFE institutions which are clear assets in support of AMC including the MTC and Wolverhampton, Coventry and Birmingham City Universities.

b. The WMCA has a legacy of skills in manufacturing and innovation, with key actors in a position to drive the agenda forward, including WMCA Skills Board/West Midlands Skills Advisory Panel.

c. Dudley College is the national exemplar in AMC skills delivery and is already exporting programmes nationally, and other UK-leading training partnerships include those between MOBIE and the HEFE sector.

d. There is a strong policy focus on investment in STEM skills and boosting productivity. The opportunity is for the growth of new technologies acting as a catalyst for digital skills in construction which can become a specialism for the WM economy.

Addressing the barriers and challenges

While there are a unique combination of strengths and opportunities, these need to be balanced against a series of barriers and challenges which will need to be addressed in order to maximise the impact of investment and growth in the AMC sector.

A number of these are UK-wide challenges which WMCA and partners will not be able to address alone, but nonetheless they are included here as they will inform the pace and focus of the 10 year roadmap.

WM economy and construction sector

a. There has been recent decline in the region's construction sector, from nearly 60,000 jobs in 2015 to 55,000 today.

b. The WM construction economy is less productive than comparator regions and the national average, with output per full time employee of £67.6k in WM compared to £78.5k nationally.

AMC sector

a. UK-wide, the AMC sector is still relatively young, and is made up of a number of emerging manufacturers with varying levels of capacity and experience.

b. AMC can present challenges in relation to funding, insurance and warranty. UK-wide efforts including an MHCLG working group are addressing these, and there have been recent positive changes as a result including NHBC's new "NHBC Accepts" route for AMC products, but nonetheless these challenges need to be recognised.

c. UK-wide, there has been a relatively large investment into productive capacity, a large proportion of which is currently unutilised. Similarly, the WM AMC sector is currently estimated to be operating at c50% of capacity.

d. Sustainable growth of the sector will require intelligent commissioning practice, smarter procurement models and likely will require demand growth to run slightly ahead of manufacturing growth in the medium term.

e. The WM AMC sector is made up of manufacturers of a range of sizes, and a key challenge is to ensure the growth of SME manufacturers as part of a varied production economy.

Capital cost, procurement and process

a. Given the young nature of the sector and lack of scale economies, AMC products can be more expensive in terms of initial capital expenditure on a like-for-like basis compared to traditional house building.

b. The full value of AMC-led development requires a different procurement approach from the start, for clients and commissioners to adopt a design for manufacture approach from the outset and to engage manufacturers early to maximise the benefit of manufacturing efficiencies.

c. The challenge for the WM in maximising the use and value of AMC is to develop approaches to development process and procurement that better enable AMC. These will include balanced scorecard procurement models that prioritise the total cost of ownership on an equal basis to up front capital cost.

AMC skills and jobs development

a. There is a need to balance UK-wide growth of AMC with benefits to the WM regional economy. There needs to be a joined up approach to demand and supply planning to ensure WM plans are integrated into the national picture as far as possible to avoid 'cannibalising' markets.

b. Relevant training provision for AMC is limited UK-wide. Only 82 qualifications have potential relevance and two qualifications in Innovative/MMC were withdrawn due to lack of take up.

Roadmap for advanced manufacture

LONG TERM VISION (10 year objectives)	SHORT TERM ACTIONS (practical steps for years 1-3)
ACCELERATED HOUSING DELIVERY AMC drives scale and pace in housing delivery across the WM. Integrated AMC-specific developers create additional supply models, while AMC plus brownfield remediation unlocks land that would otherwise be unviable to deliver. "Traditional" construction delivery models can incorporate hybrid on-site AMC approaches to improve speed, quality, productivity, and worker safety.	• Implement 20% minimum AMC categories 1 & 2 on large sites. • Explore measures of pre-manufactured value (PMV) as recommended by the Construction Leadership Council, as the basis for providing additional funding for projects that can demonstrate an uplift in PMV, across all seven categories of MMC. • Develop appraisal/funding methodology to enable additional funding where AMC proportion is increased. • Explore use of Value Tool as being developed by Construction Innovation Hub (CIH). • Identify and aggregate land assets that might enable 100% AMC housing delivery to create scale and momentum. • Engage and support AMC-led integrated developers which might create true additionality in supply and diversify the housing market.
QUALITY AND CHOICE IN NEW HOMES Advanced manufacture combines standardised processes with both standardised and customisable products to improve consumer choice. Digitally enabled development creates a golden thread for quality and components from conception through assembly to in-use performance monitoring. Advanced materials and design enable WM to achieve carbon zero objectives in new home delivery.	Bring together architects, planning professionals and manufacturers to develop a programme of design-quality led AMC product development. Focus areas could include: • Enabling a standard specification for AMC from public sector clients and drive use of Construction Quality Planning (CQP) as defined by Construction Innovation Hub (CIH). • Design code approaches to planning that enable consumer choices around a standardised "chassis" that might link to an accelerated 'type approval' process linked to pattern books. • Develop a strategy connecting AMC to the proposed planning reforms.
ADVANCED MANUFACTURE GROWTH The regional manufacturing sector is the leading location for AMC manufacturing in a now-significant UK-wide industry. Existing manufacturers, including SMEs, play a significant role as part of this sector, alongside new entrants who have been deliberately attracted to the WM. All AMC categories are represented, to enable agility and flexibility in delivery models.	• Play an enabling role across the wider public sector in the WM region to create a transparent and aggregated future pipeline of AMC development land, and use this to support the managed growth of the existing manufacturing sector. • Secure Government investment and identify land for an expansion of manufacturing capacity in the region ensuring that this is complementary to existing capacity and focuses on consolidation and additionality. • Begin to explore options for aggregated models of delivery that could be enabled by interoperability between AMC systems (see below).

MEDIUM TERM ACTIONS
(practical steps for years 4-10)

- Expand focus on AMC by encouraging other AMC categories through SCF funding – encouraging AMC as part of hybrid traditional/manufacturing-led development.
- Deliver aggregated public land pipelines (see below) as part of programmatic approach that creates certainty for sector and scale and pace in delivery.
- Identify opportunities for AMC and brownfield remediation to combine with new appraisal methodology to unlock unviable sites.

- Develop structured partnerships with AMC manufacturers around a common specification for new homes and transparency of future pipeline.
- Build on the initial steps (left) by:
  - creating incentives for manufacturers to improve on that standard in relation to e.g. quality, cost or carbon performance.
  - connecting these partnerships with the R&D theme below to explore for instance advanced material use and structured performance testing to enable co-ordinated product development.
- There is great scope for proposed planning reforms focussed on digitised planning process to benefit AMC-led development because they incorporate digital design from initiation and are therefore better placed to integrate their current approach with new digital planning processes. This workstream could also ensure adequate planner education and awareness of AMC.

Utilise the expanded AMC focus of WMCA funding (above) and the previously developed options to implement an aggregated approach to AMC delivery that might incorporate the following features:

- Co-location of SME manufacturers.
- A move to more of a platform-based approach to delivery which does not damage previous investments made by high quality offsite manufacturing businesses with a promotion of more inter-operability between providers, drawing on the work of MTC.
- A greater focus on component-led sub-assembly delivery as additionality to volumetric modular AMC, which would still be delivered by larger Cat 1 manufacturer/ developers.

LONG TERM VISION (10 year objectives)	SHORT TERM ACTIONS (practical steps for years 1-3)
SUPPLY CHAIN ENGAGEMENT The wider supply chain base in the WM grows in parallel with the manufacturing base. Component and material specialists form strategic partnerships with AMC manufacturers UK-wide. There is clarity of the end-to-end supply chain incorporating design through to operation and WM enjoys a specialism in supplying those services to digitally enabled AMC developments. There is increased 'virtual' integration of multiple businesses, including SMEs and products that are consolidated into sub-assemblies and building systems that can be used by SME developers and larger developers and contractors.	• Explore co-location for regional SME manufacturers and supply chain companies single new facility above. • Develop a comprehensive map of local supply chain capacity linked to the standardised specification referenced above. • Broker collaborative partnerships between supply chain companies and AMC manufacturers and potential for aggregation of ordering combined between manufacturers. • Develop a collaborative forum between AMC manufacturers and potential commissioners of AMC homes in the public, private and housing association sectors to provide an opportunity to build knowledge, connections, trust and understanding. • Engage the local AMC supply chain in the emerging programme of retrofit, as AMC solutions (across all categories) will be very well positioned to drive the speed and efficiency of activity in this area.
KNOWLEDGE AND SKILLS DEVELOPMENT The WM retains its stand-out strength in delivering industry-leading pathways to employment in AMC through partnerships between industry, further education and higher education. Partnerships across the region bridge the gap between construction and manufacturing, to develop new roles that operate at the interface between the sectors. End-to-end digital delivery knowledge and skills requirements are well understood and provided for.	• Develop a comprehensive AMC skills proposition, drawing on existing strengths, that offers a qualifications at all levels from level 2 to post-graduate. • Map the end-to-end AMC delivery process, and the digital skills requirements at each stage, and develop action plans to address core teaching skills and curriculum coverage gaps, for instance through additional funding for tutor recruitment.
R&D PARTNERSHIPS BETWEEN GOVERNMENT, INDUSTRY AND HIGHER EDUCATION R&D partnerships make a significant contribution to national and regional AMC growth by tackling some of the biggest barriers to AMC growth. For instance R&D partnership to enable inter-operability between AMC systems, developing a robust evidence base and showcasing "best in class" AMC development, and supporting AMC product development through testing, advanced materials development and by enabling consumer feedback to influence design. This should align to national initiatives to improve the data and evidence base related to innovative construction and should build confidence in the finance and insurance underwriting markets. New entrants and SMEs are actively encouraged into the regional AMC sector to drive innovation and introduce new approaches.	• Develop a forum or partnership vehicle through which cross-sector links and delivery can be enabled – potentially by maintaining the AMC advisory group • Key focus areas in the short term could include: – Building the evidence base for AMC development, including by linking to Homes England existing work in that regard. – Supporting the development, testing and optimisation of the standardised AMC specification. – Enabling pre-competitive collaboration between manufacturers, and connecting to national efforts in that regard such as through the MTC at Coventry or the AMRC in Sheffield, both part of the High Value Manufacturing Catapult. • Connecting the WMCA and partners to the AMC-related activities being undertaken across the UK, particularly in other combined authority regions, to maximise collaboration, value and growth in the AMC sector UK-wide. • Explore and support opportunities to develop high-profile sites and other projects which will generate national interest and enable local manufacturers to demonstrate their systems to the widest possible audience.

MEDIUM TERM ACTIONS
(practical steps for years 4-10)

- Develop bespoke partnerships with supply chain companies where necessary to enable their expansion to meet the demands of a growing AMC market.
- Broker collaborative partnerships between supply chain companies and AMC manufacturers to enable component design and development to support AMC product development.
- Focus support and effort on models with the greatest potential for scalability, across the WM and beyond including the potential for IP technology transfer domestically and internationally.

- Implement WM-wide approaches to apprentice and trainee sharing/placements between AMC manufacturers.
- Target AMC training pathways on other WM-based sectors under-going structural .
- Broker partnership working between CITB, local FE colleges, local universities and the MTC designed to break down the barriers between manufacturing and construction skills training.

- Long term programme to be developed through the forum (left) and the outputs of early stages, but features could include:
  - Developing connections between AMC and the WM specialism in brownfield regeneration, to create true additionality in housing supply including links to the proposed National Brownfield Institute.
  - Connecting WM manufacturers to developments in advanced materials research, where this might drive improvements in cost, speed, performance and sustainability.

Case Study

National Brownfield Institute

University of Wolverhampton (UoW) has invested £100 million in the new Springfield campus, to host its world-class school of Architecture and Built Environment and the planned National Brownfield Institute (NBI), which was recently awarded £14.8759m from the Government's Getting Building Fund.

The NBI will research soil and groundwater contamination and ways of regenerating contaminated land. NBI will also use knowledge from other research centres at UoW to help assess new construction methods and will enable AMC use in the region in a range of ways, including by coordinating research into new remediation technologies. It will advocate for AMC use as the additional speed of delivery will partly counteract the time required for brownfield remediation, a crucial factor as around 80% of the WM housing pipeline is on brownfield land.

Case Study

Enabling local distinctiveness through AMC: Beechwood Village

Located in Essex, Beechwood Village is delivering 570 new, custom-build homes to people on a range of incomes, and is utilising AMC and an innovative approach to town planning.

The project is led by Swan Housing in partnership with Homes England and Basildon Borough Council who worked together to secure an outline planning permission that fixed some details, and enabled resident choice within a pre-agreed framework on others. As a result, residents can configure their own home, choosing features including the external treatment, number of rooms and floor layouts, exemplifying the potential for AMC to combine the benefits of manufacture and of consumer choice to deliver high quality and personalised homes.

West Midlands Combined Authority

Housing & Land Delivery Board

Date	27th April 2022
Report title	WMCA Housing Deal 2018: Local Plans Progress Update
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration (Accountable Director) Patricia Willoughby, Head of Policy (Housing & Regeneration) (Senior Reporting Officer) Amanda Holland, Strategic Delivery Advisor (Report Author)
Previous reports	• April 2022: Housing & Land Delivery Steering Group

Recommendation(s) for action or decision:

Housing & Land Delivery Board is recommended to:

a) **Note** WMCA's responsibilities relating to the monitoring of local plans and required assurance reports to Government, how this relates to the 2018 Housing Deal and Brownfield Land funding packages, progress towards achievement of the 215,000 new homes target in the Housing Deal and progress towards the delivery of local plans; and

b) **Consider and discuss** the types of additional support and advice, that could be provided by WMCA, which would be beneficial to local authorities seeking to progress local plans, development delivery and related policy development.

1.0 Purpose

1.1 The purpose of this report is to update the Housing & Land Delivery Board on the monitoring of local plans in the region which is a formal requirement in WMCA's 2018

Housing Deal with Government; summarise progress against the milestones; highlight some of the risks associated with non-delivery; and consider the types of support from WMCA for local plans, development delivery and policy development that might be helpful to local authorities in future.

2.0 Background

WMCA's Housing Deal with HMG

2.1 The Housing Deal between Government and WMCA, announced in March 2018, included a £100m Land Fund to acquire and remediate land around priority sites to deliver at least 8,000 new homes, plus additional support of up to £250m for infrastructure provision to enable housing and economic growth.

2.2 The terms of the 2018 Housing Deal commit WMCA, as a condition of receiving the monies to ensure that the region: a) plans for and delivers 215,000 homes by 2030/1; and b) updates local plans, as necessary, to achieve this target. The agreement accordingly stipulates additional, specific interim targets and milestones to be achieved; a monthly and quarterly reporting process on local plans; and an escalation and resolution process to be used if there are delays beyond the agreed target dates.

Brownfield Housing Fund

2.3 During 2020, in recognition of the region's successful delivery record to date, WMCA secured £84 million from the Government's Brownfield Housing Fund. This comes with a housing target of at least 6,000-7,500 dwellings alongside full compliance with the requirements set out in WMCA's Single Commissioning Framework and previous funding agreements with Government (e.g. funder of last resort, test of market failure, agreed benefit-cost ratios, etc).

2.4 Similar to the Housing Deal, the Brownfield Housing Fund requires WMCA to ensure effective local plans delivery stating: '*Councils must either have an up to date Local Plan in place, or an agreed plan with MHCLG [DLUHC] for getting a Local Plan in place, to receive funding*'. This becomes even more pertinent with the announcements of an additional £28 million and £17.4 million Brownfield Housing funding in recent months. Local plans progress is also a condition of the £24m National Competitive Funding (also for brownfield land) announced in 2020.

3.0 Monitoring Progress against the Funding Agreements

The Monitoring Process

3.1 WMCA has established a monitoring process to assist reporting on local plans to the Department of Levelling Up, Housing & Communities. Local authorities are contacted on a monthly basis to summarise progress on their local plans in relation to the target dates of each authority's Local Development Scheme, the target dates having been set by the published Local Development Schemes in March 2021. Progress is reported to, and discussed with, the Department at a monthly meeting. On an annual basis, housing supply figures are collated by the Housing Market Area (HMA) Group and these are used by Government to measure progress against the 215,000 new homes target.

3.2 A more formal quarterly report on the Housing Deal performance is supplied to the Department in April, July, October and January each year and more recent funding packages (e.g. the Brownfield Housing Fund). This report must provide monitoring information on local plans milestones; progress against the 215,000 homes target; delivery of pipeline projects against the housing output targets and other related matters (e.g. private sector leverage).

Progress on Housing Land Supply

3.3 WMCA and local authority progress towards the 215,000 homes target by 2030/1 was clearly very strong in the early part of the Housing Deal period but Covid-19 has affected performance in the development industry generally and will have had an impact on supply in 2020 and 2021.

3.4 Current risks to the achievement of the 215,000 new homes target include:

- The impact on housing completions and supply through the Covid-19 period (2020/21 to 2021/22), the full impact of which will not be known until updated monitoring figures are released later this year.
- Completion figures for 2020/21 which indicate a fall from the previous year; a 'bounce back' is expected for 2021/22 and is under constant review.
- Delays to local plans, particularly those that are behind timetable because they have had an extended examination period, are awaiting an Inspector's report or an examination date. This is because local plan allocations only reach 'planning certainty' (and can, therefore, be counted towards the 215,000 target) once the plan has been adopted.

Progress on local plans

3.5 To date, it has been possible to demonstrate to Government that that most local plans have achieved good progress: one local plan was successfully adopted in September 2021 and others are emerging from the examination process with positive reports from inspectors. However, some plans are at risk of missing critical milestones.

3.6 The ability to manage delays efficiently and effectively is a consideration consistently applied by the Department so, in those circumstances where delays appear to be unavoidable, mitigation measures need to be identified rapidly and put in place. The Department maintains its focus on the adoption of out of date local plans by the end of 2023, the target date specified in National Planning Policy Guidance.

3.7 Should there be a need to escalate a local plan beyond normal monitoring procedures, potentially, this gives rise to funding and reputational risks, both to WMCA and to local authorities. We must, therefore, continue to maintain dialogue, positive working relationships and to identify appropriate mitigation measures at the earliest possible stage.

4.0 WMCA support going forward

4.1 Maintaining effective progress against the Housing Deal targets is critical to existing and future funding streams. It is important to maintain a strong housing supply, and both positive and timely progress on local plans against agreed milestones. To date, WMCA has been able to support work on development delivery e.g. studies forming part of a local plan's evidence base, policy development which requires a regional perspective, master planning activity in agreed strategic locations or regeneration corridors, infrastructure provision, remediation and/or other activity related to the deliverables of the Housing and Land Portfolio.

4.2 The Housing & Land Delivery Board is asked to consider areas of work or matters on which WMCA might usefully provide additional support to local authorities. In line with previous activity, and based on the agreed deliverables for the Housing & Land Portfolio 2022/23, this might include:

- delivery of key requirements, and output targets of Housing Deal and subsequent deals with Government
- supporting Local Planning Authorities with evidence for Local Plans and policy requirements
- developing and collaborating on Board approved policy development work and master planning
- supporting Local Planning Authorities with other funding bids to Government.

4.3 WMCA welcomes the opportunity to participate in the regular meetings of the Housing Market Area Group and some matters which require a regional perspective have been raised in that forum e.g. a further strategic employment sites study linked to the ambitions of the Regional Growth Strategy and wider WMCA policy ambitions. We welcome the opportunity to consider supporting some of the workstreams arising here.

5.0 Financial Implications

5.1 There are no direct finance implications as a result of the recommendations within this paper. There will be, in future, financial implications associated with the continued work on Local Plans, which will be funded from existing Housing and Regeneration budgets. It is worth noting a potential financial risk from some local plan milestones being delayed by more than a three-month period from the agreed targets.

5.2 Any WMCA investment into Local Plans would be governed and administered through the WMCA Single Assurance Framework and in line with the accounting and taxation policies of the WMCA and HMRC.

6.0 Legal Implications

6.1 Section 113A(1)(a) of the Local Democracy, Economic Development and Construction Act 2009 gives WMCA a power of competence appropriate for the purposes of carrying out any of its functions. Part 4 of The West Midlands Combined Authority Order 2016 (2016 No 653) confers that the functions relating to any economic development and regeneration in the constituent councils are exercisable by WMCA. Part 3 of the West Midlands Combined Authority (Functions and Amendment) Order 2017 confers functions corresponding to the functions Homes England has in relation to the combined area. Paragraph 10(2)(b) to secure the regeneration or development of land or infrastructure in the combined area, 10(2)(c) to support in other ways the creation, regeneration or development of communities in the combined area or their continued well-being and 10(2)(d) confers the function of contributing to the achievement of sustainable development and good design.

6.2 It is noted that the purpose of this paper is to provide an update on the local plans workstream in relation to the Housing Deal including progress against milestones set out in the 2021 Housing Deal Monitoring Agreement and an outline of the support offered from the Combined Authority to achieve the region's wider strategic objectives on housing and employment land. Progress in the development of local plans will encourage delivery of new schemes which may qualify for funding from WMCA through the application of the criteria and governance systems set out in the WMCA Single Commissioning Framework and legal should be sought as and when required.

7.0 Equalities Implications

7.1 There is no equality impact in relation to this report.

8.0 Inclusive Growth Implications

8.1 This report is for information and discussion only but the functions included support the principles of inclusive growth. The transformation of urban areas through the

workstreams noted in the report will have a positive economic impact on all residents and sectors of society in the West Midlands.

9.0 Geographical Area of Report's Implications

9.1 The recommendations of this report apply to the whole of WMCA area.

10.0 Other Implications

10.1 None.

11.0 Schedule of Background Papers

11.1 None.

West Midlands Combined Authority

Housing & Land Delivery Board

Date	27th April 2022
Report title	WMCA Housing & Land Delivery Board Taskforces: Progress Update
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration (Accountable Director) Patricia Willoughby Head of Policy (Housing & Regeneration) (Senior Reporting Officer) Amanda Holland Strategic Delivery Advisor (Report Author)
Previous reports	• April 2022: Housing & Land Delivery Steering Group

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is recommended to:

a) **Note** the positive work and contributions to date of the industry-led taskforces established by WMCA under its Housing & Land Delivery Board;
b) **Note** the current roles, responsibilities and activities of the industry-led taskforces established by WMCA under its Housing & Land Delivery Board; and
c) **Endorse** the suggestions for future programmes of activity of the taskforces.

1.0 Purpose

1.1 The purpose of this report is to update the Housing & Land Delivery Board on the activities of the WMCA taskforces which support the Housing and Land Portfolio and provide vital industry insight, challenge and steers across its diverse range of projects and programmes. The taskforces are all industry-chaired and advisory with a wide-ranging mix of experts volunteering their time on each taskforce. The report

also makes a number of suggestions for the future direction of travel for each taskforce which the Housing & Land Delivery Board is asked to consider and discuss.

2.0 Background

2.1 Four WMCA taskforces currently operate to support the policy initiatives of the Housing & Land Delivery Board (and, in the case of public land, also support the One Public Estate Board) which focuses on projects initiated by a range of public sector organisations:

- Commercial Property Taskforce
- Town Centre Taskforce
- Public Land Taskforce
- AMC/Zero Carbon Taskforce.

2.2 Taskforce members volunteer their time, free of charge, to provide insight, advice, advocacy, challenge and importantly '*an industry perspective*' on the different work programmes and policy areas of the Housing and Land Portfolio. They provide invaluable steers on WMCA's work, providing not only advice and support but also critical challenge and different perspectives, whilst also acting as advocates and champions for the work in industry circles with Government and national forums.

2.3 The membership of these industry-led taskforces is endorsed by both the Mayor of the West Midlands as well as the Housing & Land Delivery Board or the Chair under delegated authority.

2.4 It is important to note that the taskforces are **advisory bodies** supporting WMCA's policy and delivery activities. They do not have decision-making powers which remain with the formally constituted boards of WMCA, notably the Investment Board and the Housing & Land Delivery Board in the case of most workstreams under the Housing and Land Portfolio.

2.5 Policy work, developed collaboratively by WMCA and local authorities, is 'tested' with experts on the taskforces to obtain a variety of industry perspectives and to identify delivery challenges. This advice is then taken into consideration when working up proposals to be considered by the Housing & Land Delivery Board.

3.0 Commercial Property Forum/Taskforce

3.1 The West Midlands Commercial Property Forum was formed in 2020 and, historically, has been managed jointly by the British Property Federation and WMCA, and independently chaired by Andrew Pilsworth of SEGRO plc.

3.2 The Forum acts like a taskforce in shaping WMCA's commercial property work, providing insight into the opportunities and risks associated with commercial property development. Members provide expert opinion on specific matters such as funding bids to HM Government and the Investment Prospectus.

3.3 Following the Comprehensive Spending Review, Budget 2021 and launch of the Levelling Up White Paper, the Forum is to be re-named in April 2022 as a 'taskforce' rather than a forum and will continue to be chaired by Andrew Pilsworth.

3.4 The commercial property forum, now called a 'taskforce', has a core group of approximately 10 commercial property experts and professionals. Members have been selected for their ability to represent the property development, real estate investment, construction and real estate management industries. The taskforce meets quarterly.

3.5 Going forward, the chair's intention is that the main deliverables of the Commercial Property Taskforce will be to:

- increase, in volume and breadth, investment into commercial property in the region and wider West Midlands
- develop and showcase best practice in commercial property partnerships and joint ventures
- collate a single body of evidence of property market trends and analysis
- support WMCA on its devolution deal negotiations with Government
- help WMCA to secure a commercial property funding package from Government.

4.0 Town Centre Taskforce

4.1 The Town Centre Taskforce was established by the Housing & Land Delivery Board in 2020 with an overarching aim to support WMCA and its partners on town centre redevelopment, repurposing and regeneration. Its purpose was to help drive the agenda for our regional town centres and specifically to:

- champion our town centres
- support town centre living
- offer insight into the future of town centres including specific more detailed workshops with individual towns
- advise on how town centres can maintain their role as community and business hubs
- provide specialist and expert advice on the issues facing our town centres
- advise how we can facilitate the advancement of town centres of the future, ensuring the prioritisation of community, environmental accessibility and business needs, making town centres a lively, attractive places to visit.

4.2 The taskforce is chaired by Rob Groves, Regional Development Director of MEPC. It is currently leading the way in undertaking the first communications campaign for a Housing and Land Portfolio industry-led taskforce. The campaign will comprise posts on LinkedIn which will promote the taskforce and increase awareness of its activities.

4.3 Towards the end of 2021, the members of the taskforce and the chair decided that they wanted the group to focus more on delivery than policy and guidance. As a result, local authorities are now being offered the opportunity by the taskforce to undertake workshops with experts from the taskforce. The response has been very positive and several workshops are already planned. These workshops are an opportunity for local authorities to gain insight from industry experts and tend to be focussed on:

- an individual town centre site on which a local authority seeks advice on how best to progress development
- a group of sites within an area
- how to best approach a bid for government funding
- bringing forward specific types of development (e.g. affordable housing)
- wider master plans and town centre futures.

5.0 Public Land Taskforce

5.1 The Public Land Taskforce was launched in February 2021, following the recommendation to the Housing & Land Delivery Board in September 2020, to create an expert public land taskforce to work alongside WMCA to support public sector partners in unlocking the potential of public land.

5.2 The taskforce comprises approximately thirty members from a range of industry sectors including real estate, local government, education and environment. It is chaired by Stephen Barter, chairman of Wilton Capital Advisers, who has more than 40 years of real estate experience as an investor, developer and adviser.

5.3 The role of the taskforce is to:

- offer insight into the barriers, risks and opportunities in developing and disposing of public land, and on the latest research and trends
- advise on a collaborative and strategic approach to the asset management of public land
- support and champion new ways of working between the public and private sectors
- enable the alignment of public sector objectives facilitating the joining up of ownerships
- influence national policy and investment case work, and secure decision-making around public land development.

5.4 There have been 7 plenary meetings of the taskforce to date. The meetings have involved expert guest speakers from organisations such as the Bartlett Real Estate Institute and the Urban Land Institute, and guided discussions, in addition to smaller, focused workshops outside plenary meetings. The taskforce has provided insight into the barriers, risks and opportunities regarding public land and has supported WMCA officers in identifying how these can be addressed, as well as considering specific sites where there are opportunities for land assembly.

5.5 Over recent months, the taskforce has supported WMCA in developing a Public Land Charter for the West Midlands. Members of the taskforce have supported officers in developing the 10 principles and 5 themes included in the Charter, and their advice and championing of the Charter has been invaluable. The Charter was endorsed at the Housing & Land Delivery Board in January 2022 and is now in the final design stages ahead of publication.

6.0 AMC/Zero Carbon Taskforces

6.1 The **AMC/Zero Carbon Taskforces** have played a vital part in driving forward the sustainability policy agenda including the Zero Carbon Homes and AMC Charters and routemaps. It will be meeting again in Q2 2022 to support the Board's ambition for increased use of AMC and zero carbon construction methods in the region.

7.0 Future Direction

7.1 As part of WMCA's ongoing devolution discussions with Government for new powers and funding, the taskforces will be asked to work with and support officers in developing and championing new asks of Government. The industry-led, independent and cross-sector nature of the taskforces provide a unique insight into the needs of the region and will be critical in securing broad support for the asks of Government for new powers and funding to accelerate delivery.

7.2 The taskforces each have distinct plans for the future:

- **Commercial Property Taskforce**: The Commercial Property Taskforce will be focused on supporting the deliverables set out in paragraph 3.5.
- **Town Centre Taskforce**: The Town Centre Taskforce has recently reconfigured itself to ensure a more workshop-based and action-orientated approach. Moving forward, each quarterly meeting will focus on a specific issue relevant to town centres which members will debate and provide their views on how best these issues might be addressed. Through collaborating with local authorities, the taskforce will host workshops in addition to its quarterly meetings to support local authorities with specific sites or local issues in their town centres so that they will be able to access expert advice from recognised industry experts.

- **Public Land Taskforce**: Following the launch of the Public Land Charter (expected to be in May 2022), the intention is for those public sector organisations which will be adopting the Charter to take the document through their organisations' respective governance processes for endorsement. Members of the Taskforce have offered to promote the Charter at industry and Government forums to which they belong. There is also an intention to organise site visits so that members of the Taskforce can help to identify opportunities for land assembly and greater collaboration, applying their skills in a specific location rather than generalising.

8.0 Financial Implications

8.1 There are no direct finance implications as a result of the recommendations within this taskforces paper. There will be, in future, financial implications associated with both the communications campaigns and work that the taskforces are asked to support, which will be funded from existing Housing and Regeneration budgets.

8.2 Any WMCA investment into taskforces would be governed and administered through the WMCA Single Assurance Framework and in line with the accounting and taxation policies of the WMCA and HMRC.

9.0 Legal Implications

9.1 Section 113A(1)(a) of the Local Democracy, Economic Development and Construction Act 2009 gives WMCA a power of competence appropriate for the purposes of carrying-out any of its functions. Part 4 of The West Midlands Combined Authority Order 2016 (2016 No 653) confers that the functions relating to any economic development and regeneration in the constituent councils are exercisable by WMCA. Part 3 of The West Midlands Combined Authority (Functions and Amendment) Order 2017 confers functions corresponding to the functions of the Homes and Communities Agency (now Homes England) has in relation to the combined area. Paragraph 10 (2) (a) of the 2017 Order confers the function of improving the supply and quality of housing to the Combined Authority, 10 (2) (b) to secure the regeneration or development of land or infrastructure in the combined area, 10 (2)(c) to support in other ways the creation, regeneration or development of communities in the combined area or their continued well-being and 10 (2)(d) confers the function of contributing to the achievement of sustainable development and good design.

9.2 It is noted that the purpose of this report is to provide an update on the current activities of the taskforces that provide industry led expertise on the work undertaken to deliver the Housing and Regeneration Business Plan and also to provide suggestions for future direction of travel. There are no direct legal implications arising from this report, however the work of the task forces will encourage delivery of new

schemes and legal advice will be sought as and when required. Any co-investments including grant and/or loan funding from WMCA will need to comply with the criteria and governance systems set out in the WMCA Single Commissioning Framework and will need to be considered on a case by case basis.

10.0 Equalities Implications

10.1 There are no direct equalities implications arising from this report.

11.0 Inclusive Growth Implications

11.1 There are no direct inclusive growth implications arising from this report. However, there will be positive inclusive growth outcomes from the work of the taskforces.

12.0 Geographical Area of Report's Implications

12.1 The report covers the whole of the WMCA area.

13.0 Other Implications

13.1 None

14.0 Schedule of Background Papers

14.1 None

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West Midlands Combined Authority

Housing & Land Delivery Board

Date	27th April 2022
Report title	Local Transport Plan Consultation: Opportunities for Housing and Land Portfolio
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration (Accountable Director) Alex Greatholder, Principal Transport Policy Officer, TfWM Policy & Strategy (Senior Reporting Officer) Gurdip Nagra, Strategic Delivery Advisor, Housing & Regeneration (Report Author)
Previous reports	• January 2022: WMCA Board approved the draft Local Transport Plan Core Strategy for consultation • April 2022: WMCA Housing & Land Delivery Steering Group considered a report on the LTP

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is recommended to:

Note the proposed approach and progress on development of the West Midlands Local Transport Plan (LTP) and the development of Area Strategies in partnership with West Midlands local authorities.

1.0 Purpose

1.1 The purpose of this report is to provide an update for the Housing & Land Delivery Board on the development of a new West Midlands Local Transport Plan and, in particular, provide an update on the recent engagement on the new Local Transport

Plan Core Strategy. The WMCA Board approved the draft Core Strategy for consultation on 14th January 2022. The engagement commenced on 7th February 2022 and ran until 4th April 2022.

2.0 Background

2.1 Under the Transport Act 2000, Local Transport Authorities (LTAs) have a statutory duty to produce and review a Local Transport Plan (LTP). As a consequence of the Local Transport Act 2008 and the West Midlands Combined Authority Order 2016, WMCA is the LTA for the seven constituent metropolitan districts/boroughs. The LTP will align to the core priorities of WMCA ensuring that all future funding bids and transport activity is optimised to meet the Corporate Aims and Objectives agreed by the WMCA Board in November 2021.

2.2 The LTP must set out policies for the promotion and encouragement of safe, integrated, efficient and economic transport to, from and within the LTA area as well as proposals for the implementation of those policies. WMCA and the seven metropolitan district/borough councils of the West Midlands must carry out their functions so as to implement these policies. The LTP carries statutory weight in a range of decisions made by many public authorities as they execute their functions under their relevant statutory provisions. It is a critical document for ensuring the interests of the West Midlands public with regards to transport, and its impacts are considered in such decisions. The LTP must be developed collaboratively between the WMCA as LTA and the 7 local authorities and implemented in partnership with other agencies and organisations such as National Highways, Network Rail and public transport operators.

2.3 Since Movement for Growth (the fourth West Midlands LTP) was published there have been significant changes to the policy context including changes to the political, social and economic landscapes which have implications for transport policy and plans. Most significant of these are the impact of the Covid-19 pandemic and the challenge of climate change, with WMCA declaring a climate emergency in 2019 and committing to ambitious plans of becoming a net zero region by 2041.

2.4 The first WM2041 five year carbon plan was approved and adopted by the WMCA Board in March 2021. This set out a priority for WMCA to support changes in travel behaviours through reduction in car usage and a much higher modal share of public transport and cycling. A key deliverable for WMCA was producing a new LTP aligned to WM2041. In July 2021, Transport for West Midlands (TfWM) published the 'Reimagining Transport in the West Midlands' Green Paper. The purpose of the Green Paper was to start a conversation with politicians, public and stakeholders on how transport policy and strategy in the West Midlands could change. The focus was to engage on how the region could better respond to the big challenges it faces, including responding to the economic downturn and the climate emergency, as described in the Green Paper through five 'Motives for Change'.

3.0 Green Paper Engagement, Summer 2021

3.1 The Green Paper engagement over the summer of 2021 saw over 600 full responses (and around 700 partial responses) to the public survey and around 20 detailed responses from a range of stakeholders including local businesses. In addition, a series of deliberative engagement and citizens panel sessions also took place with around 60 stakeholders and a group of around 70 individuals through the TfWM online community.

This group was demographically representative of people from across the region. Key messages included:

- The issues raised in the motives for change resonated with respondents who felt that these were important. Climate change and addressing inequality were the areas of most concern.
- There was a clear sense from responses that the current approach to transport was not delivering sufficient improvements, or that things were getting worse. 92% of respondents were fairly concerned or very concerned by climate change and 83% agreed that a key policy aim should be to tackle inequalities in transport access.
- There was a view that the West Midlands could not build its way out of the problems and should adopt an approach which places greater emphasis on using existing transport infrastructure better.
- Two thirds of respondents felt that levels of traffic on local roads were now a problem.
- The majority of people acknowledged that increasing levels of active travel were important, but that a lack of safe infrastructure and busy roads were a barrier to more people choosing to walk and cycle.
- The shift to electric vehicles was supported, but there was concern that the challenges of congestion would not be resolved.
- Whilst the car is still going to be important for many people's travel choices, a majority of people agreed that car use needed to be reduced. Many were open to new ways of accessing cars instead of private car ownership.
- When subsequently polled, 68% of a sample of respondents to the original consultation strongly agreed or agreed with the need for the use of 'sticks' to achieve significant change in travel behaviour. However, less people believed that either national or local government would use them within the next 5 years.

4.0 National Policy

4.1 The last 18 months have also seen a number of policy statements from Government which have placed an emphasis on transport's role in responding to the need to rapidly decarbonise; delivering the Government's levelling up agenda; and supporting the post pandemic recovery of the UK. This has included an ambition to see half of all journeys in cities and towns walked or cycled by 2030. Government has made it clear that local authorities will be expected to take the lead on bold decisions to influence how people travel; and to take local action to make the best use of space. These changes are in order to enable active travel and transform local public transport, including though considering appropriate parking or congestion management policies to promote and support the desired behaviour change.

4.2 Government has said it will drive decarbonisation and transport improvements at a local level by making quantifiable carbon reductions a fundamental part of local transport planning and funding. This has influenced the approach to the City Regional Sustainable Transport Settlement programme. Further LTP guidance is expected to be

published by Department for Transport in early 2022; and future funding decisions are likely to be directly informed by the level of reductions which are evidenced.

5.0 Developing the new West Midlands Local Transport Plan

5.1 Following engagement on the Green Paper, a discussion with local authority Leaders took place on how the West Midlands should develop its new LTP. There was consensus that investment in transport remains critical to support the region's growth outcomes, enable modal shift, and improve accessibility – especially in traditionally under-served and deprived areas of the region. The pandemic has exacerbated some of our longstanding economic challenges around inequality, poverty, and poor health. The new LTP will help continue to make a strong case for transport investment, such as the City Regional Sustainable Transport Settlement, that will play a critical role in opening-up opportunities for communities across the region. There will be a focus on allowing the region to quickly regain growth momentum and avoid long-term post-pandemic economic scarring, whilst helping us to make good progress towards developing a carbon neutral transport system.

5.2 However, despite the positive progress being made, the need for more fundamental change was acknowledged and accepted. Our current approach is largely focussed on improving alternatives and informing travellers, so they understand the benefits of using those alternatives. Whilst continuing to invest in the alternatives to the car is going to continue to be important, this alone will not be sufficient to generate the kinds of behaviour change needed to meet our aims.

5.3 We know from reviewing the impact of the current approach and modelling different scenarios that with the policies and programmes we have in place now we won't deliver the scale and pace of change that we need – even if we had significantly higher levels of funding to improve the public transport network or build more cycle infrastructure. Based on current actions we would not meet our WM2041 target for carbon reduction (or even the UK 2050 climate change emissions targets), and we would continue to make marginal progress against the other issues raised in our Motives for Change. Ultimately, without a change in direction, transport risks becoming a handbrake on the greener, fairer inclusive growth the region wants to deliver.

5.4 In discussion Leaders identified that being risk averse (carrying on with the same policy approach) would in itself be a risky strategy that fails to deliver the kind of transport system needed to meet the aims the region has agreed to try and achieve. The importance of demand management to achieving behaviour change was understood and it was acknowledged that Government policy is channelling local government towards such measures.

5.5 However, across the public and stakeholders there remains a significant lack of consensus around the best way to engender the behaviour change required. There are also significant concerns about the impacts of change at such an unprecedented scale and pace. To further complicate the matter, as a result of COVID-19 impacts, there has also never been so much uncertainty about how travel behaviours will change further into the medium to long term.

5.6 A challenge for the new LTP will be honesty about the need to manage demand to help deliver the scale of behaviour change required and about the consequences of not

taking appropriate action. The plan is being developed to account for this challenging position. It is being honest about the need for a demand management approach to help the transport system deliver against the region's wider objectives and vision. However, it is positioning the choice to manage demand as something that needs to be worked through with local people, communities and stakeholders with an understanding of the issues that will need to be managed if we carry-on as is. Engagement with the public and stakeholders will need to be on-going and more extensive than ever before. It will be important for the LTP to be understandable and relatable for the public and using TfWM's traveller segmentation tools we have started to articulate the vision through images of the places people experience and how transport underpins their day-to-day activities.

5.7 This approach will also enable the West Midlands to be realistic and clear over what is and is not within the gift of local leadership – understanding that appropriate local action on local streets can help give us a quieter and healthier urban environment, but that more transformational behaviour change (for example to significantly reduced carbon emissions) requires broader consensus across the country and national leadership (and sharing of the burden). Ultimately one regional area will struggle to be radically transformational without risking unintended and disadvantageous consequences for its economy. Conversely, change adopted at a similar pace and more uniformly across the country means concerns over economic displacement effects can be managed and companies operating across these geographies can plan and deliver national operating protocols with more confidence. This latter point is particularly relevant to the freight, logistics and automotive industries which the West Midlands is a national leader in.

5.8 Given the above context the approach to developing and implementing change will need to be different. To respond to this, the new LTP will have a dynamic and flexible approach to transport policy and delivery. A dynamic plan, which is regularly reviewed, will enable an on-going discussion with members and the public on how and where progress can be made on more or less difficult pathways. The draft Core Strategy sets out a policy tool kit framed within 6 'Big Moves', from which WMCA, TfWM and local authorities will need to develop their delivery plans.

5.9 The Big Moves are all intended to improve the transport system to encourage a change in travel behaviours and deliver against our motives for change. The need to consider accessibility more holistically, i.e. not just through mobility but also through better spatial planning and digital connectivity ('the triple access system') is also reflected. This is illustrated in the figure below showing connections between the 'big moves' and the motives for change.

Through Action against the 6 big moves…	…changes citizens' experience of transport options…	…which changes their behaviour…	…which divorces accessibility from the impacts of transport…	… and delivers our motives for change
• Behaviour change for the better • Growth that helps everyone • Safer streets to be more active • Public transport that connects people and places • A resilient and safe transport network • Delivering a green revolution	• Reliable • Efficient • Flexible and convenient • Personalised • Well-connected • Comfortable • Accessible and easy to use • Affordable • Safe and secure • Cleaner and greener • Healthy • Modern	**Avoid** • Reduce travel **Shift** • Change destination or route • Change mode **Improve** • Choice to drive more efficiently • Choice to use more energy efficient vehicles	• Traffic reduction • Electrified transport • Improved accessibility	• Sustaining economic success • Creating a fairer society • Supporting local communities and places • Becoming more active • Tackling the climate emergency

6.0 Next steps

6.1 The Big Moves policies will be detailed further in a series of additional LTP documents to be developed and consulted on during 2022. In addition, TfWM is working with local authorities to develop a suite of Area Strategies within the framework of LTP policies. These will sit beneath the Core Strategy and alongside the Big Moves and will translate the policy tool kit into local areas. They will help us to understand the impacts of policies and interventions and to develop plans to solve the challenges of different kinds of places, covering neighbourhoods, corridors and centres but which are tailored to diverse places within areas/districts. The area strategies will also draw upon relevant work from local plan reviews to help understand and develop approach responses to help mitigate the impacts of new development, in particular, the significant increases in housing proposed with the metropolitan area.

6.2 Following WMCA Board approval in January, engagement on the draft Core Strategy started on 7th February and ran through to 4th April 2022. The engagement used a range of channels to maximise awareness and engagement across stakeholders and the general public. The engagement saw over 1200 responses received from the public and from a wide range of stakeholders. Some additional engagement is still ongoing to ensure that as broader range of groups are engaged as possible.

6.3 Subject to feedback and updates on the LTP, it is intended that a final Core Strategy and draft Area and Themes strategies will be presented to WMCA Board later in 2022 alongside draft Big Moves and Area Strategy documents. A copy of the draft Core Strategy summary document (**Appendix 1**) is attached.

7.0 Financial Implications

7.1 There are no direct financial implications from the information contained in the report. The Single Commissioning Framework provides a single set of criteria and governance systems that will be applied to all applications for available devolved WMCA Housing, Land and Property Development funds, together with a consistent process and timelines for decision.

7.2 All WMCA disposals of land must follow the Acquisitions and Disposals Framework following approval at Strategic Asset Board.

8.0 Legal Implications

8.1 Section 113A(1)(a) of the Local Democracy, Economic Development and Construction Act 2009 gives the CA a power of competence appropriate for the purposes of carrying-out any of its functions. Part 4 of The West Midlands Combined Authority Order 2016 (2016 No 653) confers that the functions relating to any Economic development and regeneration in the constituent councils are exercisable by the CA. Part 3 of The West Midlands Combined Authority (Functions and Amendment) Order 2017 confers the functions corresponding to the functions of the Housing Community Agency has in relation to the combined area.

8.2 The contents relate to informal discussions which may or may not lead to the need for further legal input and contractual arrangements. The Legal Team will provide assistance and support as and when requested.

9.0 Equalities Implications

9.1 There are no immediate equalities implications in relation to this report. However, individual strategies and delivery schemes will need to take into account local area needs and local stakeholder needs to ensure the schemes developed through the charter benefit local residents, including harder to reach groups. To that effect equality impact assessments will need to be conducted to understand demographics, key inequality issues and how investment can help address key inequality gaps. Engagement and consultation with key equality stakeholders is also crucial.

10.0 Inclusive Growth Implications

10.1 None at this stage.

11.0 Geographical Area of Report's Implications

11.1 The LTP relates primarily to the seven constituent authorities but there are wider implications for the whole of the WMCA area.

12.0 Other implications

12.1 None.

13.0. Schedule of Background Papers

13.1 None.

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Transport for West Midlands

Reimagining transport in the West Midlands:

Local Transport Plan Core Strategy - Summary

Contents

Introduction

'Reimagining Transport in the West Midlands' is the fifth Local Transport Plan for the West Midlands' seven metropolitan districts/boroughs.

This is the summary of the draft Core Strategy of the Local Transport Plan - the overarching document that sets out our aims, vision, approach, and a framework for action.

After the publication of our Green Paper for 'Reimagining Transport in the West Midlands' we asked for the views of stakeholders through a *conversation about change*. The engagement used a variety of channels including surveys, market research and online and in-person workshops.

Those we spoke to when we engaged on the Green Paper agreed that we need an emission free transport system that's fairer, safer and healthier. It also needs to be a transport network that gets people to places without clogging up our streets or causing climate change and making pollution worse.

The issues raised around our 5 Motives for Change resonated with those who responded. Climate change and addressing inequality were the areas of most concern.

There was a clear sense from responses that the current approach to transport was not delivering sufficient improvements, or that things were getting worse.

The new draft plan shows how the transport system will be developed and managed in the region and we've already started talking to people and businesses about it and about how it can meet our future needs.

There are difficult decisions to be made; people know we can't build our way out of all our problems or rely on new technology, like electric cars, to solve them.

Whilst the car is still going to be important in future, the majority agreed that **car use needed to reduce.**

The shift to electric vehicles was supported but there was concern that **electric vehicles wouldn't solve the wider issues**

92% of respondents were concerned by **climate change**

83% agreed that a key policy aim should be to tackle **inequalities in transport access**

2/3 of people felt that levels of **traffic on local roads** were now a problem.

The majority thought increasing **active travel** is important, but that **dangerous and busy roads** were holding people back.

People felt that we can't build our way out of all of our problems – we need to focus on **using existing infrastructure better**

68% of polled respondents to our green paper consultation said **'sticks' are needed** to achieve significant change in travel behaviour.

Feedback from engagement on our Green Paper

Our aims

Whatever happens it's clear that there needs to be a change in our travel habits and behaviours.

To address the big social, economic and environmental issues we face, the objectives in the new plan are framed around 5 'Motives for Change' where we think that changing transport could help us better support inclusive growth by providing a transport system that's fair to everyone and the environment.

There are three key changes needed in our transport system to make this happen - we need to improve accessibility, reduce traffic and electrify transport. That means using our cars less and accessing what we need in a different way.

Meeting commitments to decarbonise

Tackling the climate emergency is just one of our Motives for Change. It is unique because it requires a definitive pace and scale of change.

There are national legal targets to reach "net-zero" carbon emissions by 2050, and local ambitions within our WM2041 agenda to reach net-zero by 2041. But whilst those end dates are important, national targets and local ambitions also require us to hit carbon reduction milestones along the way.

Shifting to zero emission vehicles (ZEVs) like electric and hydrogen powered vehicles is important but not enough to meet these decarbonisation goals. We also need to reduce the amount we are using our vehicles.

By 2031, we would need to deliver the following scale of change to meet national obligations or to go above and beyond to deliver local ambitions.

National targets (net-zero by 2050)	Local ambition (net-zero by 2041)
10% reduction in car mileage	**35%** reduction in car mileage
Accelerate ZEV uptake by **1 year**	Accelerate ZEV uptake by **5 years**

The vision

Although private vehicles will still be important in the future, we want the West Midlands to be a place where people can thrive without having to drive or own a car.

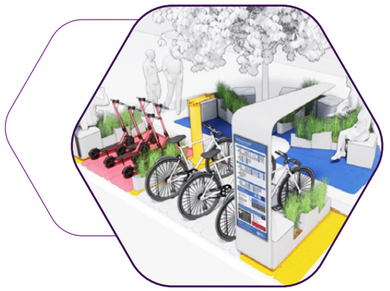
We have developed a vision for a well-connected 45 minute region and 15 minute neighbourhoods, where people can travel to access what they need through a mix of walk and wheel, and ride modes.

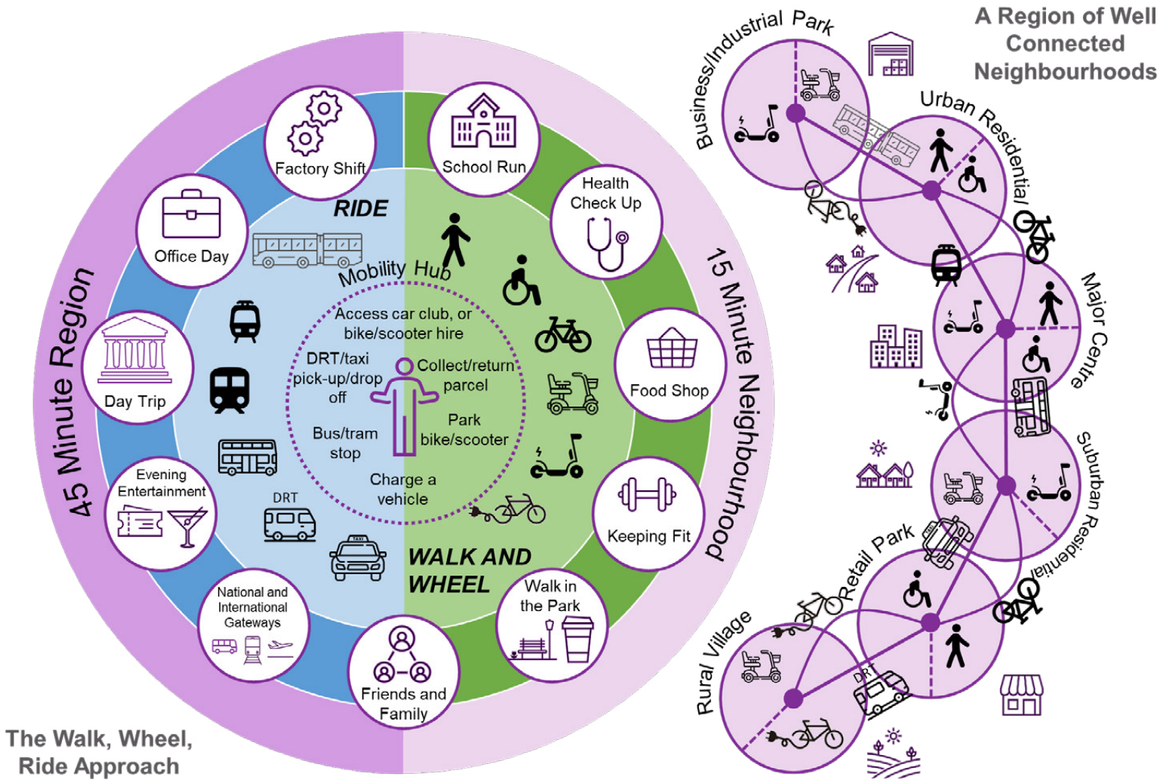
It means that a good range of services in our neighbourhoods can be accessed by “walking or wheeling” in a round trip of no more than 15 minutes, and a good range of places across our region to undertake work, leisure and socialising can be accessed by “ride” modes within a 45 minute trip.

This system will be supported by shared mobility services. These are services like car and van clubs so you don’t have to own an expensive vehicle, or bike and scooter hire schemes to use in places where perhaps you couldn’t bring your own bike or scooter – for example when you’ve caught the bus or train into your town/city centre and need a quicker way to get around once there.

All of this will be connected by mobility hubs. These are places where you can conveniently access a range of transport services. So as well as catching a bus, you might be able to access car and van clubs, hire an e-scooter, charge your electric vehicle or perhaps make use of a parcel drop off and pick up point.

This vision is not meant to be prescriptive. We recognise that everyone travels for different reasons, to different places and using different modes, and places themselves are different. So what works in one neighbourhood might not work in another. But it does give us something to aim for where everyone will have good options and choices to access what they need.





15 Minute Neighbourhoods

a good range of services in our neighbourhoods can be accessed by “walking or wheeling” in a round trip of no more than 15 minutes

45 Minute Region

a good range of places across our region to undertake work, leisure and socialising can be accessed by “ride” modes within a 45 minute trip.

Ride modes

- Sprint (bus rapid transit)
- Light rail, inc. very light rail and trams
- Local heavy rail services
- Conventional bus services
- DRT — Demand responsive bus services – mini-buses that can be hailed on-demand.(inc. Ring & Ride)
- Taxis and private hire vehicle (inc. ride hailing)

Walk and wheel modes

- Walking
- Using a wheelchair
- Conventional pedal cycle
- Mobility scooter
- Micromobility - fully electric or electrically assisted light vehicles such as e-scooters and e-bikes (noting that these are not currently generally permitted on public highways)

Our actions

To help deliver the changes needed we will focus on action across 6 'Big Moves'.

These Big Moves are a framework for the actions we will take to improve accessibility and encourage **avoid, shift and improve** behavioural changes.

Avoid

Avoiding travel - for example by accessing services online and consolidating trips we make;

Shift

Shifting travel - to places that are more accessible by sustainable modes of transport, such as cycling, walking or public transport and travelling by those modes; and

Improve

Improve travel - by designing out emissions and other impacts from the vehicles we use and tailoring their use, for example by adopting zero emission vehicles (such as electric/hydrogen vehicles).

For our new Local Transport Plan to be effective in reducing car use and improving access by other modes of travel it must include actions to:

- **Invest in better provision** for alternatives to our cars; and
- **Manage demand** by discouraging the behaviours we want to do less of, such as using our cars.

An overview of each of the Big Moves is presented on the following pages. The LTP will include six detailed strategies for the 6 Big Moves setting out challenges, opportunities and principles to consider across the region. Four Area Strategies will then set out how actions across the Big Moves are applied in specific places as appropriate to local views and context.

AVOID

Behaviour change for the better

- Better information to make better travel choices
- Building consensus and appetite for action on our streets
- Managing the transport network to promote behaviour change

Growth that helps everyone

- Promoting accessible new development
- Designing and getting transport right for new developments
- Making the most of digital connectivity

SHIFT

Safer streets to walk and wheel

- Equipping people with skills and confidence
- Quiet and safe local streets
- A Starley Network with segregated routes for wheeling

Public transport that connects people and places

- Better public transport services
- More options for shared mobility
- A better connected and integrated network

IMPROVE

A resilient transport network

- Keeping the West Midlands moving
- A well-maintained network
- Using our network better for efficient and safer travel

Delivering a green revolution

- Assisting the switch to zero emission vehicles
- Working with businesses to innovate and export future mobility solutions
- Using our transport system to enhance and protect our environment

Behaviour change for the better

Many measures being set out in this strategy are designed to improve sustainable travel options to support behaviour change. But these in isolation won't be enough to achieve impacts at the scale or at the pace that is needed! To deliver behaviour change, the travel choices that we will need to move away from - like driving - would need to become less appealing. We are all part of the problem and we can all play our part in the solution by choosing to travel differently. However, we will need to look carefully at the measures which drive behaviour change and build consensus on the need for "sticks" as well as "carrots".

Growth that helps everyone

Good, sustainable access to opportunities is critical to help us deliver inclusive growth and to be successful. But to do this we need to be building the right things in the right places. New developments must be planned in line with the objectives of this LTP. We must minimise transport's harmful impacts and maximise the attractiveness and success of sustainable modes.

Safer Streets to walk and wheel

We want more trips to be made by walking and wheeling. These 'active' modes provide significant benefits to people and their local streets and communities. They're also very sustainable and affordable. They can also have a positive impact on people's physical health and mental wellbeing and provide a good alternative to the car.

Avoid

Information

- Critical in helping people make the right decisions.
- Even better promotion of public transport
- Visible brands across our different modes, including the SWIFT smart card.

Demand Management

- Reallocating road space and higher parking charges at key destinations and workplaces.
- Charges can also be used to encourage cleaner vehicles.
- Engagement is an essential part of the design and delivery

Avoid

Sustainable and accessible development

- Continue to support a brown field first policy
- Innovative and sustainable travel in all developments.
- Minimise the impacts of single occupancy car usage

Digital connectivity

- Improve access to high speed broadband and 5G connectivity to all
- Reduces digital poverty and create a series of connected communities.

Shift

Low Traffic Neighbourhoods (LTN's)

- Limit traffic in a street or collection of streets
- Safer, easier and more appealing for cycling and walking.
- LTN's have resulted in a number of benefits.

Micromobility

- A broad range of transport options that can be used for short distances
- E-scooters are also being trialed in the West Midlands.
- Starley Network for cycling and walking

Public transport that connects people and places

Safe, convenient, affordable and accessible public transport is essential. This includes bus services and Ring and Ride across our area which are already vital for those who can't drive, as well as our expanding West Midlands Metro, Sprint and rail networks. Shared mobility services (like bike hire and car clubs) could also play a greater role in future. One in four West Midlands households don't have access to a car. Within a more inclusive transport system, public transport will need to play an even greater role.

A resilient transport network

Roads are important because they are used for most trips, whatever the mode. They play a different role in the lives of people and businesses. We need to make our streets work for everyone by developing the network so that balances the competing needs for space and supports the travel behaviours, which will help to deliver our outcomes.

Delivering a green revolution

Places need to be cleaner and greener. Private and public vehicles need to be zero emission, helping to improve local air quality and reduce noise. In addition, providing green infrastructure will help habitats and biodiversity. This encourages people to spend more time outside improving physical health and mental wellbeing benefits.

Shift

Public transport

- Invest and improve the infrastructure to enable operators to provide better services
- Greater priority on highways for buses
- Improvements to rail capacity, along with new stations

Shared mobility

- Allows people to move around without the need to own a car
- Services include car clubs and e-scooters and infrastructure to support their operation
- Mobility hubs in key locations where consumer demand can sustain them

Improve

Regional Transport Coordination Centre (RTCC)

- Oversees all transport modes in partnership with operator and local authorities.
- Helps to coordinate the delivery of the transport investment programme and minimise impact through collaboration with our partners.

Highway maintenance

- Work with local authority partners on a focused plan
- Prevent the deterioration of streets and structures
- This is essential in the improvement of all modes of transport, including emerging mobility solutions

Improve

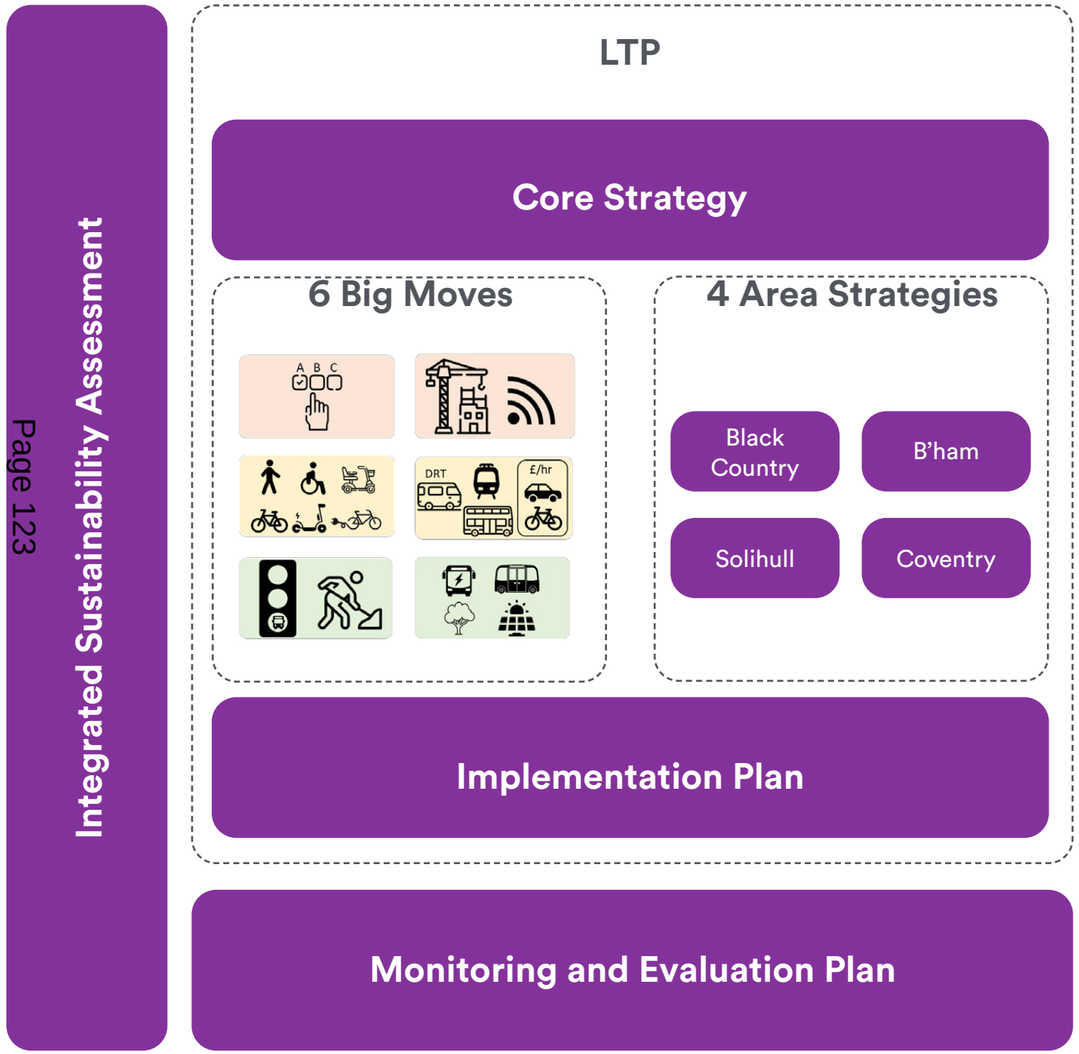
Electric Bus City

- Coventry to become the UK's first electric bus city
- Every bus will be electrical powered by 2025
- Improved air quality, reduced greenhouse gas emissions and lower running cost.

Green bus shelters

- Improves air quality and generates power. Being trialled in Halesowen.
- Transport for West Midlands worked with the Halesowen BID
- Roof top plants improve the town centre environment and attracts bees.

Implementing our new Local Transport Plan



This LTP proposes a wide programme of improvements to provide better alternatives to the private car.

We have recently approved a £1.2bn funding programme to improve the transport system. This City Region Sustainable Transport Settlement will allow us to continue to invest in better public transport, opportunities for walking, wheeling and cycling and help to make our roads safer and places greener and cleaner.

It does this by investing in measures that support better access to what people need via these alternatives. But alongside this investment there will also be a need to manage demand by discouraging the behaviours we want people to do less with the possible use of physical measures like bus lanes, which remove the amount of road space available to cars and other vehicles.

As we develop and implement our plan we will foster and encourage collaboration to solve the problems in places that face similar challenges. We will use new ways of engaging and communicating to help people understand the changes required and how they can benefit them.

We will develop these strategies in partnership with local authorities, ensuring that the identification of the measures needed will be problem-led rather than solution-led to help us create a more prosperous and better-connected West Midlands which is fairer, greener and healthier.

Choices matter

As we develop detailed plans in different places we will need to think about how the decisions over how we govern transport locally will affect the future of transport in different places. It's important to think about what places will look like if we carry-on as we are or what they might look like if they change course. What kind of future do you want for you and your family?

Transport for
West Midlands

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