

BRABAZON URBAN DISTRICT, Bristol UK

JRDV Urban International led a creative multi-national team creating the development plan for Brabazon, a new urban live-work-shop-play district. Brabazon is designed to create a uniquely vibrant district for North Bristol and become a key catalyst site to attract and retain innovative next-generation companies and expand the creative economy for the entire region. Pioneering culture and creativity, with a new state-of-the-art Arena and City-Green at its heart. It creates a thriving new neighborhood, bringing together all the energy and edge of Bristol to set new standards for modern city living.

Next-Generation Net-Zero Sustainability. The new urban district is based on district level sustainable systems that both reduce cost and increase the high-performance quality of the environment. A human-centric approach forms the basis of the design. Energy management, circularity and well-being are the primary drivers in the choice of planning and building design. The careful curation of green spaces with a biophilic approach is crucial for the formation of an environment that promotes health and well-being.

Place & Authenticity. The Master Plan approach is based on humanizing the modern building architecture, and creating visually and emotionally engaging urban places, spaces and architecture that is memorable, referential and a delight to experience. The District will become an environment where people can meet inspire, live, work, and play. The district is imagined as a social hub specifically designed to encourage encounters and interactions.

Walkable/Bikeable Citymaking. Using creative super-block design, the plan establishes a district framework of open-air, pedestrian-friendly streets, plazas and parks that are interconnected by bike paths that make cars non-essential.

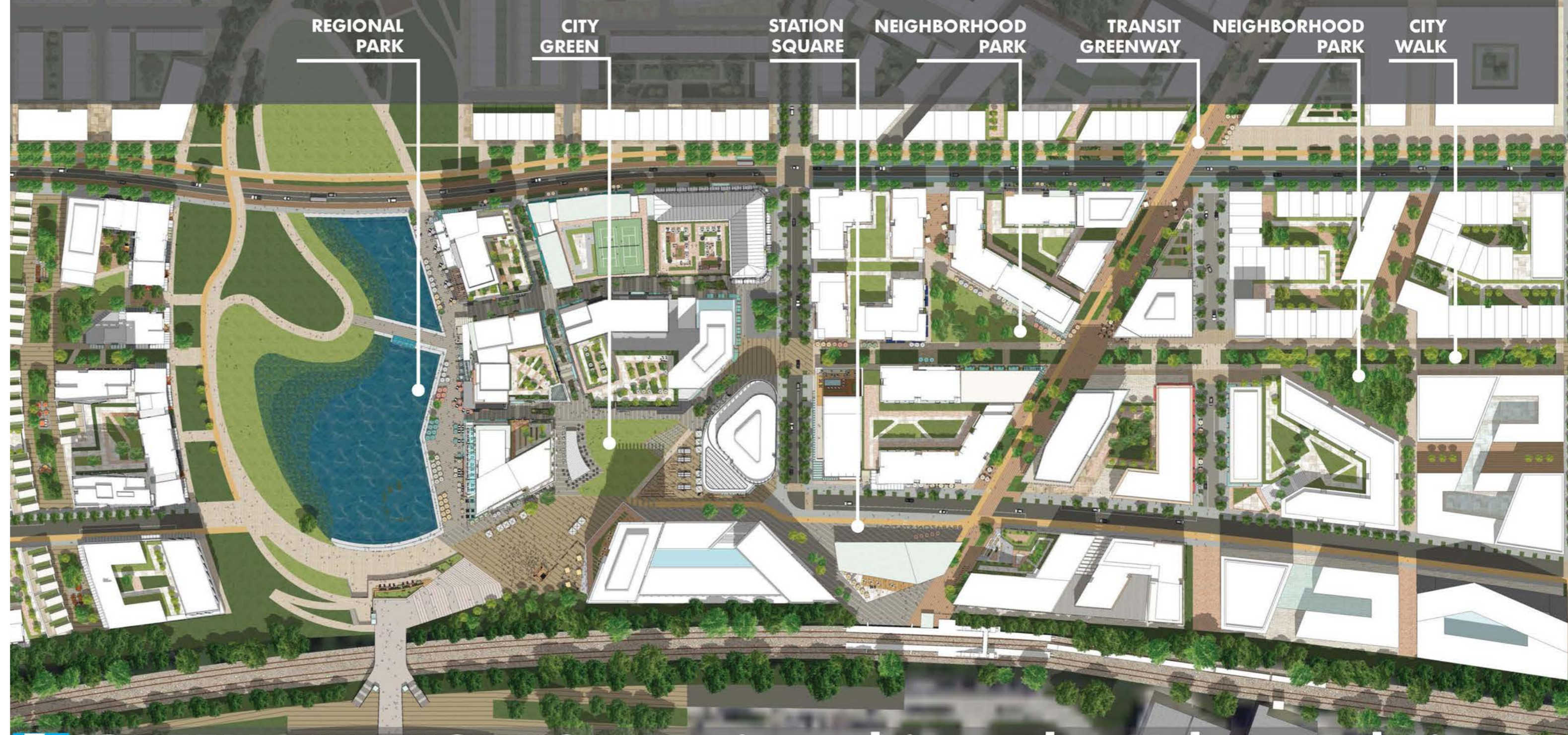
Project by E. McFarlan as Principal & Director at JRDV Urban International



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5 GREEN NETWORKS - Designed into the Urban Fabric









Phaseable Implementation Plan

Parcel Plan

- Zoning Districts allow for flexible futures to accommodate market changes and tenant opportunities
- Mixed-use Zoning allows for a range of densities and uses to co-locate to create a more active urban place

By allowing Mixed-uses to co-locate, the plan allows individual lots to change uses and densities, which allows for development flexibility over time

- Town Center - Parcels 01-07
- West Lake Promenade - Parcel 08-09
- University District - Parcel 04
- Research, Mfg and University Partners - Parcels 13-14
- Lower Density Districts - Parcels 10-12, 15
- Parking Parcels - P1-P3



Eastern Framework Land Use Summary

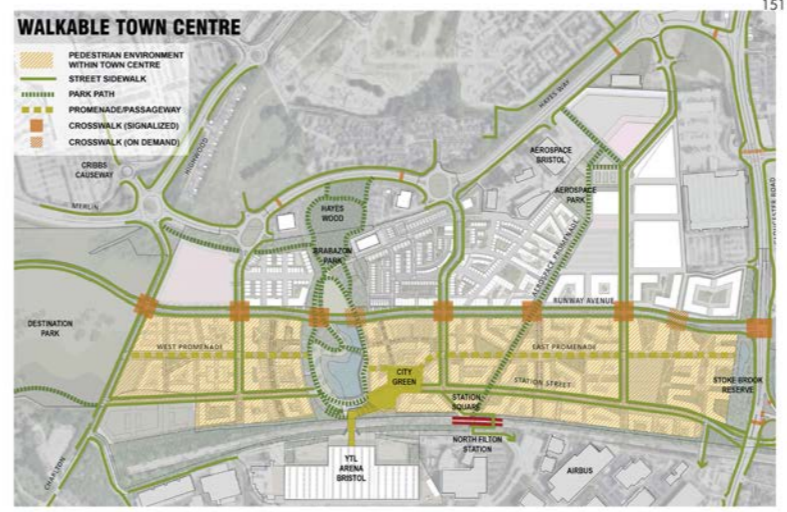
Residential	5,162 units
Student Housing	1,500 units
Retail	376,000sf
Commercial	3.39Msf
Public Open Space	33.15ac

- Overall Eastern Framework is designed to maximize the synergies of all elements of the Plan.
- Land Uses have been strategically placed to:
 - Maximize land value,
 - Ensure an activated Town Centre
 - Create synergies between uses
- The overall development zoning allows uses to be flexibly located over time to adjust to market opportunities



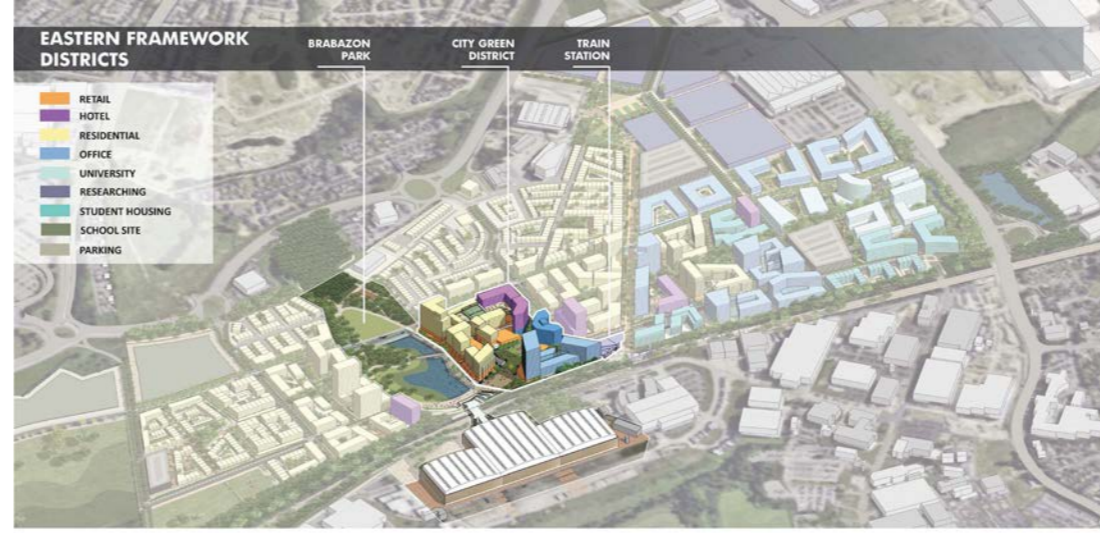
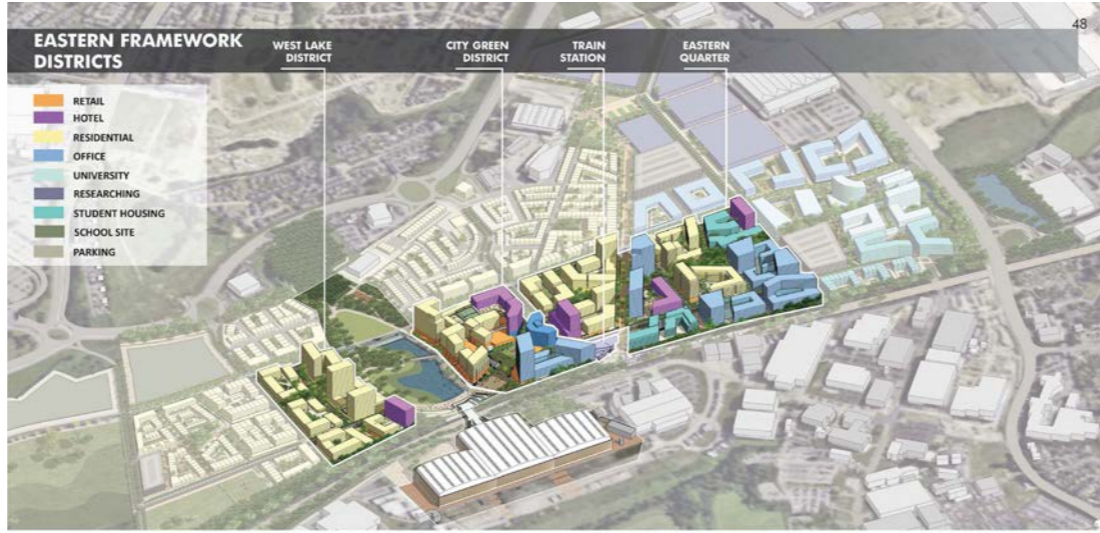
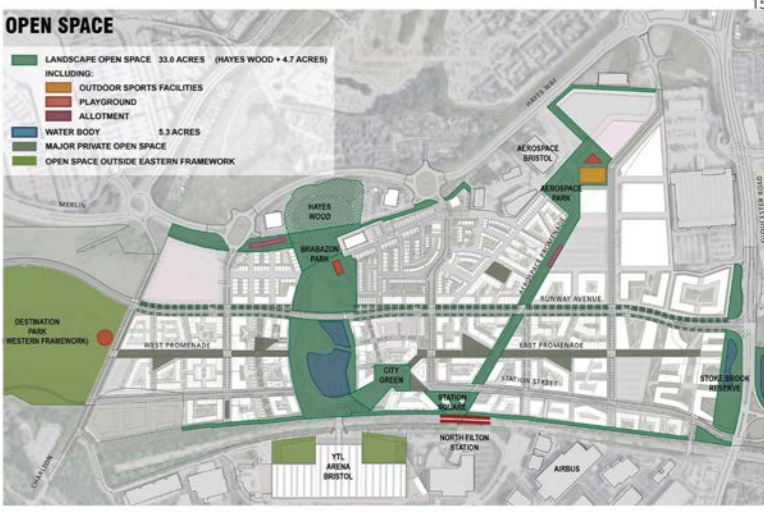
Walkable Network

- Street pattern creates a walkable Town Centre between Rail and Runway Avenue.
- Heart of Town Centre, near Arena, has no through streets.
- Convenient walking network of tree-lined street sidewalks, signature open spaces and mid-block pedestrian promenades.
- Runway Avenue has an even cadence of crosswalk signals.



Open Space

- Brabazon Park signature open space extends from Arena to Hayes Wood.
- City Green retail heart for Town Centre.
- Aerospace Promenade connects Rail Station with Aerospace Bristol museum and park.
- East and West Promenades extend throughout Town Centre.
- Water bodies provide storm water treatment as well as contribute to Town Centre placemaking.



DISTRICT INFRASTRUCTURE

- **Energy Micro-Grid** - AI-Optimized Micro-Grid - Manage Buy/Sell/ Island Energy Capabilities
 - On-Site Solar and Shared Storage
 - Facilitates Energy Load-Shifting and Energy Price Reductions
- **District Heating/Cooling** - with shared Central Utility Plant
 - Mixed-Use Load Sharing allows 30%-65% Net Energy Savings
 - Shifts Mechanical cost from Vertical to a Independent Asset
 - Shifts H/C costs from CapEx to OpEx to

The New Urban District - Sustainability by Design



SUSTAINABLE INFRASTRUCTURE

- **Shared Water/Waste Managed System**
 - Grey Water System reused for Irrigation, Mech. Make-up, and Flushing
 - Potential for on-site high-efficiency Black Water treatment to significantly lower Utility Infrastructure Costs
 - 50%-70% Reduction of Water Usage
- **Mobility Management**
 - Possible 20%-80% reduction in Private Auto Use
 - Shared EV Fleet, with On-Site Renewable Charging
 - Manage On-demand Last Mile transit connectivity to reduce reliance on private car use

The New Urban District - Sustainability by Design



SUSTAINABLE INFRASTRUCTURE

- **AI Optimized Smart-City Technologies**
 - Digitally Managed Infrastructure on an Open Standards Platform
 - AI Systems allows continuous learning and improvement to reduce costs and increase performance
 - Cloud and Edge based computing facilitates upgrades and eliminates latency and islanding
 - Integrated and Interoperable Infrastructure Controls allows access to integrated Data and Performance Intelligence, etc.
- **Creating an independently Finable Utility District as its own Asset Class**

The New Urban District - Sustainability by Design



Performance Matrix

Energy Use	50% reduction of Cluster EUI w/ Combined CUP; AI Managed District Grid-MicroGrid; High performance-lower cost existing building adaption
Renewable Resources	30% On-Site solar generation; District battery storage with Peak-power load shifting; 80%-100% Renewable w/ off-site Purchase Power Agreements
Water & Waste	50%-70% reduction in Water Use w/ District managed retention systems, 100% on-site recycling and re-use
Housing	50%+ Attainable/Affordable Housing - 50% Market Rate; Managed density in high amenity walkable urban typology
Materials & Resources	20%-50% transition to renewable and low carbon building materials; Maximized use of modular bldg components
Site Performance	Minimized Heat islanding; Maximize shared Urban Green; Integrated storm water management; Walkable/Bikeable community typology
Mobility & Connectivity	50%-70% reduction in private car ownership; On-site fleet management; integrated P-transit w/ new mobility on-demand TNC entities



The New Urban District - Sustainability by Design

