



Moore Point

Sustainability Statement

FINAL
06.04.2020

EXECUTIVE SUMMARY

This Sustainability Report has been prepared by Integral Group on behalf of Leamac and Coronation to describe the approach to sustainability in relation to a Planning Proposal at Moore Point, Liverpool (the site).

The site is located east of Liverpool CBD on the opposite side of the Georges River and north of Newbridge Road. It provides a site area of 38.5 hectares (approx.) and is currently developed with industrial uses.

The site is situated within Liverpool Collaboration Area's Georges River North precinct and is subject to the priorities and actions of the Liverpool Place Strategy (Strategy), which was released by the Greater Sydney Commission (GSC) in December 2018. Refer to the figure below:



Figure 1 – Site aerial (Source: Nearmap modified by Mecone)

The Strategy states that by 2036 Liverpool will be a rejuvenated river city, offering diverse and growing residential and employment opportunities. Major health, education and retail precincts, and a mixture of open spaces and parklands alongside the Georges River, will create a rich mix of jobs and workplaces, public spaces, shops and entertainment.

Under the Strategy the site is identified as ‘mixed use’, which comprises:

‘a mixture of commercial, retail, residential and community uses that provide sustainable employment, that is complementary to, and not in competition with, the commercial core’

The 2019 Annual report summary for Liverpool Collaboration Area highlighted key steps commenced and completed to address the imperatives acknowledged in the Strategy to accelerate the delivery of the Collaboration Area. These included:

- Engagement with TfNSW to prepare the Liverpool Place-based Integrated Transport Strategy and accelerated investment; and
- Flood studies and floodplain risk management plan completed by Liverpool City Council.

The land uses reflected in the Strategy are reinforced in Liverpool City Council's Local Strategic Planning Statement (LSPS), which identifies the site for investigation as residential/mixed use to support the CBD and Innovation Precinct in tandem with linking open space and green corridors.

The LSPS provides the following short to medium term action (12-24 months) specific to the Georges River North precinct:

Action 11.2 – Investigate amendments to LEP to rezone River precinct north of Newbridge Road (Moore Point) as a mixed-use zone to support the Liverpool CBD and Innovation Precinct, with an extensive open space system and cross-river linkages (short to medium term).

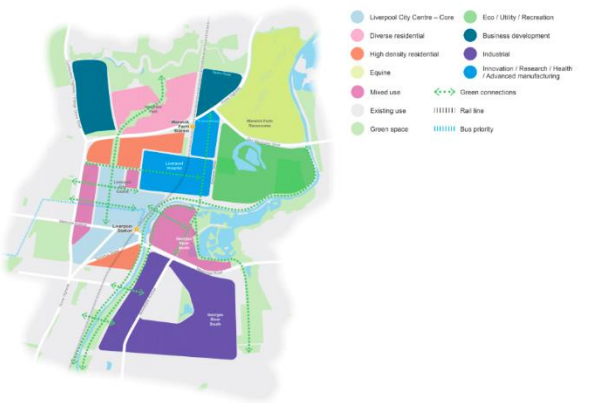


Figure 2 – A Place Strategy for Liverpool (Source: Liverpool Collaboration Area Place Strategy 2018)



EXECUTIVE SUMMARY

The Planning Proposal involves the creation of a mixed use precinct, providing new homes, jobs and open space adjoining the Georges River and connecting to Liverpool CBD. Key features of the proposal include:

- Adaptive re-use of existing heritage;
- Foreshore embellishments and new open spaces;
- Educational and cultural facilities;
- Connections to Liverpool CBD and Train Station; and
- Transport, intersection and collector road improvements.

The Planning Proposal aligns with the priorities of Government and the implementation phase of the Place Strategy by facilitating the transformation of the Collaboration Area with new jobs, infrastructure, green spaces and housing. The Planning Proposal responds to The Pulse of Greater Sydney's performance indicators, which sit under the following key themes:

Infrastructure and Collaboration

The Planning Proposal will facilitate additional jobs, education and housing in close proximity to Liverpool CBD and Train Station. The proposal will support additional medium and long-term housing supply in Liverpool CBD through diverse and new housing products.

The proposal supports the continual expansion and growth of Liverpool Innovation precinct and nearby health infrastructure, with potential to provide complementary uses near Liverpool Hospital and educational and cultural facilities on the site.

Productivity

The Planning Proposal supports the growth of the thirty-minute city, ensuring Liverpool emerges as a premier CBD in the Western City.

The proposal provides capacity for new transport infrastructure on the site, road and intersection upgrades and locating density near major transport infrastructure (Liverpool Train Station and Badgery's Creek Aerotropolis). The proposal encourages additional business activity and investment in Liverpool by providing new commercial uses that will complement Liverpool CBD.

Liveability

The Planning Proposal significantly improves upon the existing use of the site by creating walkable places for people to live work and play. This includes foreshore embellishments to the Georges River, improved connections across the Georges River and adaptive re-use of existing heritage items.

These measures will contribute to Sydney's Green Grid, improve access to services in Liverpool CBD and establish a community that celebrates identity and place.

Sustainability

The Planning Proposal addresses the urban heat island effect by significantly increasing the quantum of green space on the site for active and passive recreational use. The proposal will provide new parks and green connections to surrounding open spaces including Haigh Park, which will contribute to the urban tree canopy of the area.

Overall, the Planning Proposal represents a clear and consistent strategic line of site with the priorities of government. It meets the performance indicators, priorities and objectives expressed in the District Plan, Place Strategy, LSPS and The Pulse of Greater Sydney.

Nothing contained in the body of this report/assessment would preclude the Planning Proposal from rezoning and gazettal for residential/mixed use purposes.



INTRODUCTION

APPROACH

CONTEXT

The Moore Point Precinct is a proposed urban renewal precinct of mixed use between Liverpool and Chipping Norton area. It is positioned in a riverfront location that is well connected to public transport and Liverpool City Centre.

Precincts of this nature are central to the effective urban growth of Sydney and delivering the vision of the Western Parkland City.

VISION 2036

The sustainability vision is for a precinct that:

- supports substantial reduction in *GHG emissions*;
- reduces the consumption on *non-renewable resources* such as water and materials, while limiting waste;
- provides a place that *adapts to the impacts of climate change* through urban heat management and design for a future climate;
- provides a *healthy, livable and amenable* urban environment'
- supports local *ecosystems* and *biodiversity*;
- is connected with, and supportive of, *future mobility* trends including active transport, connection to public transport, electric vehicles, shared vehicles and future mobility services.

This Sustainability Statement presents a strategy for how the project will consider sustainability opportunities as it develops, through its planning, design and infrastructure provisioning stages.

This statement addresses the possible governance and assurance mechanisms for embedding sustainability initiatives and principles in the precinct.

STATEMENT OF COMMITMENTS

The Moore Point precinct will work collaboratively with Liverpool Council, The GSC and Transport for NSW to:

1. To **embed** sustainability principles within the precinct governance and implementation documents, to provide planning certainty for sustainability outcomes.
2. To **support** the inclusion of sustainability initiatives and innovation within the concept masterplan.
3. To **encourage** greater ambition in pursuit of the sustainability priorities identified in the Western District Plan.



INTRODUCTION

SUSTAINABILITY FRAMEWORK POLICY & PLANNING CONTEXT

The concept design addresses a range of sustainable principles and is capable of contributing towards the sustainability goals that are presented in local, state-level and global agreements, legislation and policy.

GLOBAL UN Sustainable Development Goals

At least seven of the UN Sustainable Development Goals are advanced through sustainability in cities and urban renewal precincts.

Paris Agreement

Cities are critical to the global goal to reduce GHG emissions in order to hold average temperature increase to well below 2°C and pursue efforts to keep warming below 1.5°C above pre-industrial levels.

STATE

Western Parkland City District Plan – Under the authority of the Greater Sydney Commission (GSC), the Western Parkland City District Plan considers sustainability in connecting the centres in the Western City District to improve Liveability, Productivity and Sustainability and notably to improve urban resilience in the face of increasing heat risk.

Liverpool Collaboration Area Place Strategy – The site is at the Georges River North Place in the collaboration area, bringing together representation from Liverpool Council, the GSC and the development team for collaborative decision-making.

LOCAL

“Our Home Our Liverpool” 2027 – the Community Strategic Plan considers the environment as one of 4 strategic directions addressing:

- Energy & GHG Emissions
- Waste
- Biodiversity
- Housing
- Air Quality
- Water Quality.



Figure 3 – UN Sustainable Development Goals targeted in development.

Connected Liverpool 2040 – Liverpool’s Local Strategic Planning Statement – the Liverpool local strategic planning statement identifies sustainability priorities aligned to the Western Parkland City District Plan:

- Bushland and waterways are celebrated, connected, protected and enhanced;
- A green, sustainable, resilient and water-sensitive city
- Rural lands are protected and enhanced

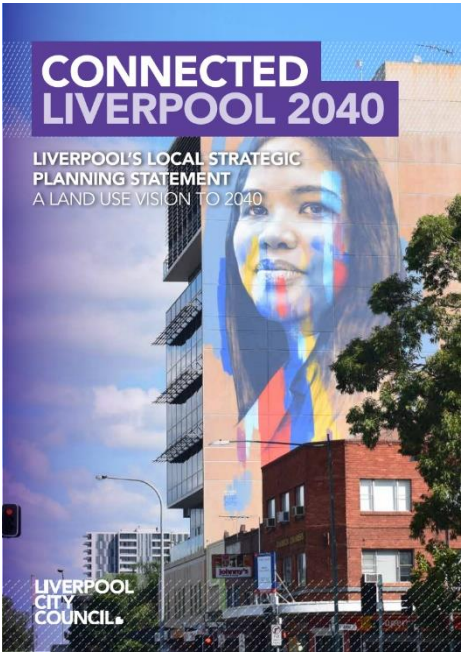


Figure 4 – Liverpool Place Strategy and Local Strategic Planning Statement



LIVERPOOL COLLABORATION AREA PLACE STRATEGY

Whilst the Place Strategy's actions are primarily allocated to Liverpool City Council and various parts of the NSW Government, the project can contribute to many of the Place Strategy actions through the Placemaking Working Group.

SUSTAINABILITY PRIORITY 8

Moore Point will work collaboratively with Liverpool City Council and the Office of Environment and Heritage to support sustainability actions in the Georges River North Place.

SUSTAINABILITY ACTIONS

Actions 23 & 24 The project will support a floodplain risk management plan for the precinct, including floodplain constraints categorisation and flood evacuation studies.

Action 25 The project structure plan will reflect opportunities to improve the useability of the riverbank while supporting active mobility and sustainable urban water management.

Action 26 & 28 The Structure Plan will provide a green spine between Lake Moore and the George's River frontage, supporting the green grid and the rehabilitation of the George's River as well as providing habitat connectivity and urban heat management through the precinct.

Action 27 Brickmakers creek is not impact by he project.

SUSTAINABILITY PRIORITY 9

The Moore Point Structure Plan will embed resilience in its structure plan and make supporting climate change, community resilience and systems resilience a governance priority.

SUSTAINABILITY ACTIONS

Action 29 The project will engage through the Working Group to deliver a precinct in line with the NSW Government's urban tree canopy target. The green spine, street tree strategy and rehabilitation of Georges River frontage will be essential components of the approach to canopy cover.

Action 30 The project will engage through the Placemaking and Transportation Governance Working Groups to embed low-carbon initiatives in future development.

Opportunities that have been considered include:

- Passive design guideline for buildings
- Rooftop and precinct renewable energy
- Future utilities (smart grids)
- Vehicle electrification
- Public transportation
- Active transportation
- Urban heat management to reduce cooling needs

Action 31 The project will work collaboratively with stakeholders to support integrated water management across the precinct.

Opportunities that have been considered include:

- Stormwater catchment and re-use
- Green infrastructure with swales and raingardens to manage water quality while providing amenity and pocket habitat opportunities.
- Water recycling, connecting non-potable demand in the precinct to any potential recycled water scheme.

Action 32 The project will engage through the Working Group to encourage precinct-level renewable energy systems.

Opportunities that have been considered include:

- Smart grid opportunities via private embedded networks
- Building, precinct and off-site renewable energy opportunities (solar PV and wind)
- Energy storage supporting grid stability and resilience
- Electrification to mitigate on-site fossil fuel combustion.

Action 33 The project will engage through the Working group to address urban heat risk.

Opportunities that have been considered include:

- Detailed analytics in design for quantified urban heat and urban amenity analysis
- Urban fabric guidance
- Urban land cover guidance
- Urban metabolism guidance.



SUSTAINABILITY STRATEGY

METHODOLOGY

The delivery of sustainability principles and initiatives is best understood in the context of the built environment’s governance and the various procurement frameworks through which sustainability outcomes can be implemented.

Sustainability opportunities have been assessed for the key built environment systems – buildings, utilities, public realm and transport systems. The delivery strategy is therefore structured in line with these mechanisms as illustrated in the scheme below.

- **Planning Governance** – governing authorities, development control, planning agreement and contractual opportunities for sustainability
- **Buildings** – design opportunities for built form
- **Public Domain** – design considerations for public space
- **Utilities** – energy, water & waste management strategies on precinct
- **Transport & Mobility** – opportunities for active transport and mobility in the urban context
- **Assurance** – mechanisms by which the non-financial performance of the precinct can be assured.

MASTERPLAN DESIGN INTEGRATION

The concept masterplan design for Moore Point has identified specific design opportunities for delivering a sustainable urban environment.

BUILDINGS

Passive design strategies are applicable for both the high-rise and the lower podium buildings. The tower design allows for optimum solar access on site.

Passive design strategies allow for comfortable living environments at no extra costs.

PUBLIC DOMAIN

The Georges River frontage and riparian zone as well as substantial new green space in the masterplan provides high quality urban spaces and increases liveability on the precinct.

The use of native plants in the public domain adds to the quality and contributes to biodiversity.

UTILITIES

The site is suitable for on-site renewable energy in the form of rooftop PV and may help reduce peak electricity demands on the precinct scale.

Rainwater catchments in streets and parks and water reuse helps reduce reliance on the water network for irrigation and it reduces the stormwater load on the sewer system.

TRANSPORT & MOBILITY

The precinct is well-connected to public transport and the concept masterplan facilitates active transport.

These contribute to sustainability in terms of livability and connectedness of the community within the Sydney Metropolitan Area.

A range of sustainability initiatives are inherent in the concept masterplan that has been prepared for Moore Point.

With the right Governance and Assurance mechanisms in place, this plan provides a framework for the precinct to achieve its sustainable objectives and set a new standard for urban renewal in the district.



Figure 5 - Urban Systems framework for addressing sustainability



GOVERNANCE

PLACEMAKING WORKING GROUP

The Joint Landowners Group for Moore Point have proposed a Placemaking Working Group to ensure that the development of Moore Point over the next 40 years delivers on the vision for Liverpool as Sydney's third CBD.

AIM

The aim of the Working Group is to collaboratively explore and assess place-led opportunities to ensure the precinct vision is delivered.

The interim vision below is expected to be refined by the Working Group:

A riverfront place for people which is well served by public transport, connected to its surrounding landscape and complements Liverpool City Centre. It will be mixed use with cultural and educational opportunities for residents and visitors. Connected with green gridded streets, bridges and landscaped waterfront it will be a focal point for the growing Western Sydney metropolis and place for everyone.

SCOPE

Placemaking

Ensure the structure plan will deliver the desired amenity, activation and walkability in an urban setting to create a place that is welcoming, comfortable, safe and family friendly.

River interface

Agree to foreshore embellishments to the Georges River in line with the precinct vision, including improved connections across the Georges River.

These measures will contribute to Sydney's Green Grid, improve access to Liverpool CBD and establish a community that celebrates identity and place.

Sustainability

Explore opportunities for precinct-wide sustainability initiatives in line with Western City District Plan, and to address the urban heat island effect by increasing the quantum of green space currently found on the site for active and passive recreational use.

GROUP MEMBERS

The Working Group requires the collaborative contributions from:

- Liverpool City Council (Chair)
- Greater Sydney Commission Environment Commissioner
- Representatives of the Joint Landowners Group (Coronation and Leamac) and their consultants as required
- Additional members may be invited by the working group, including but not limited to:
- Department of Planning, Industry and Environment (foreshore approvals, Place Design and Public Spaces)
- Transport for NSW
- Other state agencies as agreed

MEETINGS

The Placemaking Working Group meet monthly with additional meetings for specific workstreams to be held as required.



IMPLEMENTATION MECHANISMS

A sustainability implementation framework for Moore Point may comprise a site-specific DCP, a potential Voluntary Planning Agreement with Council, a masterplan and a range of contracts and tenders for future design and construction services.

All these tools will consider how the precinct's sustainability principles will be embedded in its buildings, public domain, utilities and mobility systems.

DEVELOPMENT CONTROL PLAN

A site-specific DCP allows for sustainability principles tailored to the needs of the precinct and its surroundings. It is a useful instrument to guide the built form and ensuring a balanced density that underpins a vibrant live/work precinct.

It can also provide guidance on:

- Rainwater catchment in parks and in the promenade on the precinct
- Green roof provisions on low-rise buildings
- Building fabric to support passive design
- On-site renewable energy
- Use of native plants in urban green space to support biodiversity and habitat connectivity
- Land use mix (e.g. employment dividend)

VOLUNTARY PLANNING AGREEMENT

Voluntary Planning Agreements are well suited to the consideration of social and physical infrastructure to support new development.

CONTRACTS AND TENDERS

Construction tenders and other contracts will include sustainability performance requirements for embedding supply chain considerations, construction impact management and the achievement of any building-level certifications in the delivery of buildings on the precinct.

ASSURANCE

Moore Point will use the principles of the Green Star Communities rating tool to benchmark sustainability for the precinct.

Green Star Communities is a voluntary certification framework administered by the Green Building Council of Australia that considers the economic, social and environmental performance of precincts in Australia.

It provides recognition of precinct-wide approach to embedding sustainability in project delivery.

Moore Point presents as a good opportunity to benchmark sustainability using the Green Star Communities rating framework in Western Sydney.

The Green Star Communities rating systems addresses:

- Governance
- Livability
- Economic Prosperity
- Environment
- Innovation

The Moore Point masterplan and development control plan will be benchmarked against the tool (not committing to certification), to demonstrate the precinct's commitment to achieving sustainable outcomes while maintaining flexibility for the detailed resolution of any single phase or project.



MOBILITY | Public Transport

Connections to public transport and future mobility

MOBILITY | Active transport

Pedestrian connection to Liverpool Station

UTILITIES | Water

Integrated urban water management, including:

- rainwater catchment from rooftops
- stormwater management in urban spaces
- Water recycling with Sydney Water.

BUILDINGS | Passive Design

Passive design of towers & solar access on site:

- Shading
- Natural ventilation
- Building fabric

PUBLIC DOMAIN | Green Grid

- Riverfront rehabilitation
- Green connectivity
- Urban heat management

BUILDINGS | Livability

Green roof design on low rise: livability & outdoor

PUBLIC DOMAIN | Urban Amenity

- Green Spine
- Street trees for canopy cover
- Green infrastructure

UTILITIES | Energy

On-site renewable energy possibilities:

- Rooftop PV
- Embedded networks
- Batteries
- Demand control



Figure 6 – Sustainability opportunities for the Moore Point Structure Plan



ABOUT INTEGRAL GROUP

Integral Group is a global network of building services and sustainability engineers collaborating under a single deep green engineering umbrella.

We specialise in the design of simple, elegant, cost-effective systems for a wide variety of project types: residential, mixed use, critical environments (cleanrooms, laboratories, and data centres), institutional, industrial, and commercial buildings.

We also provide comprehensive analyses of installations that help prioritise energy performance potential. Integral Group is widely regarded as a pioneer in building design, sustainability and performance.

Our team recognises the importance of increasing efficiencies and longevity of systems, while mitigating long-range costs.

Our services include design, feasibility studies, sustainable master planning, community- and district-scale energy system design based on low-carbon, renewable energy sources, peer reviews, energy audits, construction administration, and commissioning.

Additionally, we implement a technically innovative approach to defining clients' requirements and providing a fully integrated product that supports their business objectives.

With a staff of over 500 located in fifteen offices across the United States, Canada, the United Kingdom and Australia, Integral Group is registered in all US States and Canadian Provinces and Territories.

As a member of the Canada, US and Australian Green Building Councils, we have over 80 LEED Accredited Professionals

Measurable Impact

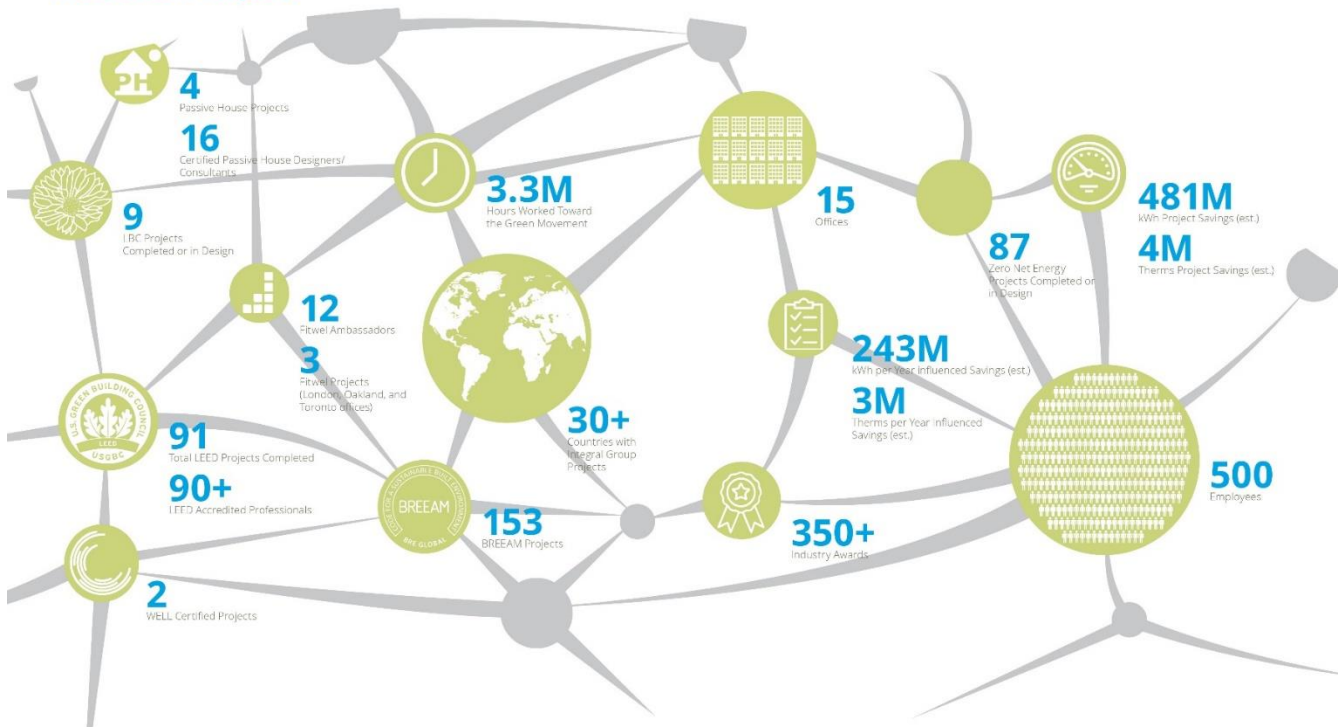


Figure 7 – Integral Group Global Impact





Australia Sydney

Level 7, 16 Spring Street
Sydney NSW 2000
+61 2 9053 6730

australia@integralgroup.com
integralgroup.com