# Waterloo Metro Quarter State Significant Precinct Agency Consultation Register

Study Requirement	Торіс	Agency	Meeting /Corro
2.10	Physical and 3D CAD models	CoS	06/02/18
3.1	Public Domain	CoS	17/01/18 20/09/18
5.1	Transport impact assessment	TfNSW	27/0717
		RMS	23/04/18
		CoS	18/04/18
5.2	Cycling, public transport and road network area	TfNSW RMS	29/05/17 e 23/04/18
	Trip generating potential for all modes	TfNSW RMS CoS	27/07/17 23/04/18 18/04/18
7.3.	Developer Contributions	TfNSW DET NSW Health	27/07/17 21/07/17 21/07/17 27&28/09/17
		CoS	PWG
8.3	Open space	CoS	10/10/18
8.5	Local infrastructure needs	CoS	10/5/18
8.11	Community facilities	CoS	10/5/18
14.5	Urban Forest Strategy	CoS	08/09/18
17.4	Flood risk assessment	CoS	04/05/17
22.2	Population and employment data sets	CoS	09/08/18
25.1	Public Art Plan	CoS PAAP,	12/06/2018
26.1	Other State and Federal agencies	SACL	10/04/18
	-	CASA DIRD	20/08/18 27/03/18

#### **Abbreviations**

CoS: City of Sydney

PAAP: Public Art Advisory Panel

DET: Department of Education and Training

RMS: Roads and Maritime Service

TfNSW: Transport for NSW

Most of the above agencies have been consulted on numerous occasions. The meetings (and in some cases correspondence) identified above relates to those most relevant to the substance of the study requirement.

UrbanGrowth NSW also held two rounds of five half day Technical Innovation and Working Group (TIWG) Meetings between the UrbanGrowth, our consultant team and various NSW Government and other stakeholders between July and September 2017. These were attended by representatives of most of the above agencies.

### **Waterloo Metro Quarter**



## **Meeting with Waterloo Congregational Church**

Tuesday 10 April 2018: Landcom Level 14, 60 Station Street, Parramatta

#### What we heard:

- You are excited to see the artist's impression of the Metro Quarter streetscape, with the Waterloo Congregational Church a focal point of the new streetscape. The mix of uses surrounding the church will contribute to family life in Waterloo.
- You are happy to have a maintenance accessway on the south side of the Church.
- The management of the site during the demolition phase has been very good, with no issues arising from noise or dust.
- You would like to see an alternative sewer vent solution. A new one was recently installed and is placed in an impractical location. This can be addressed through the design process.
- We have located a loading bay for wedding and funeral cars adjacent to the church in the new laneway. One space is not enough for the church Minister and wedding vehicle at the same time.
- You do not want stray bins along the footpath. Bins from neighbouring businesses will be stored within their own building footprint and garbage trucks will use a service accessway located behind the street frontage.
- You will think about the paving finish to the church building. Metro Quarter paving to the church building or your own preferred paving to the church boundary (curtilage paving) are both possible.

### What happens next:

- We will call you in advance of the LAHC visioning report release.
- We will let you know about the on-street parking arrangements on Botany Road and if an additional basement car park in a tower building is available.
- We will bring some options plans for the estate and Metro Quarter tower plans to the next meeting.
- The community will get their say on the masterplan in mid-May.
- We will meet again at Landcom offices on Wednesday 2 May at 1:30pm.

## Contact us any time:

James Bichard 0459 890 926 (until 20 April) Travis Brown 0484 080 311

Nick Graham 02 9841 8057 Louise Taper 0410 518 308

Dianne Knott 0401 456 656



# Waterloo SSP Transport, Streets and Connectivity Technical Innovation and Working Group – Meeting #2

#### Held on 28 September 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs, Nick Graham, James UrbanGrowth NSW (UGNSW)

Bichard, Matthew White, Ian Cady, Jody

Summers, Jennifer Chang

Peter John Cantrill, Andrew Aspden City of Sydney (CoS)

Aaron Nangle, Anna Johnston Department of Planning and Environment

(DPE)

Cameron Steuart, Christian Arkell Jacobs

Meike Tabel Turner
Arthur Smart Arup

Chris Bain Ethos Urban

Ron Meyer, Dylan McCallum Land and Housing Corporation (LAHC)

Bridget Tregonning, Simon Bennett, Sydney Metro Imogen Markus, Kenneth Hind

Maria Flood, Luke Freudenstein NSW Police Force (Redfern)

James Hall, Shane Schneider RMS

Desmond Mow, Dean Boston, Vijey Transport for NSW (TfNSW)

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UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided a brief update on the SSP Study process, summarised the feedback received to date on the draft baseline analysis and outlined recent meetings and work in progress.

Jacobs gave two presentations, firstly to provide an update on modelling and secondly to provide an update on the metro quarter. There was time for group discussion on matters that need further consideration to progress technical work, including opportunities to address traffic and pedestrian conflicts at key intersections adjoining the metro quarter. The presentations were based on the findings from the draft baseline reports.

#### **Workshop notes**

**Attendees** 

	TRANSPORT
1	Mode Share
1.1	In response to the presentation on modelling, there was discussion about assumptions and the need for:
	<ul> <li>Jacobs to review the mode share percentage and confirm with Transport for NSW and RMS</li> </ul>



	City of Sydney to provide evidence of future traffic generation		
	Land and Housing Corporation to issue car ownership rate for estate		
1.2	Jacobs to review traffic generation:		
	Check the AM/PM peak times between Working Papers and Modelling Report		
2	Modelling		
2.1	Jacobs to review the numbers of people using the intersection on Botany Road. Jacobs to undertake the following assessment:		
	Delayed waiting time could cause disobedience e.g. j-walking		
	Dynamic modelling needed		
	Need to broaden SIDRA modelling area to see the effects on other intersections		
	SIDRA model to be issued and AIMSUM model needs to be completed		
	Look at pedestrian holding locations		
	Do heat mapping for the intersection		
2.2	Botany Road capacity to be considered		
2.3	Define hierarchy of users for safety purposes		
2.4	Dynamic modelling needs to be completed		
3.	Considerations for addressing the traffic and pedestrian conflict on Botany Road around the metro quarter:		
	Make Cope Street a slow street		
	Widen footpath		
	Tunnel from the concourse under Botany Road		
	Divert more heavy vehicles onto Westconnex to further relieve Botany Road		
	Further future modelling – model beyond 2031		
	Pedestrian bridge		
	Cycle provisions		
	Car parking rates		
3.1	Review the Buckland Street crossing and cycle path due to the upgrade to Alexandria Park School		
3.2	Coordinate signalling – scrambled crossings versus two phased signalised crossing		
3.3	Consider a new road and crossing to alleviate the pressure on Botany Road		



# Waterloo SSP Sustainability and Infrastructure Technical Innovation and Working Group – Meeting #2

#### Held on 18 September 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs, Jody Summers, Nick Hill, UrbanGrowth NSW (UGNSW)

Ian Cady, James Bichard, David Johns

Roger Swinbourne, Daniel Fettell, AECOM

Suzanna Remmerwaa

Georgia Vitale ARUP
Dan Szwaj Turner

Anna Mitchell, David Fitzpatrick City of Sydney (CoS)

Attendees Palitja Woodruff Department of Planning and Environment

(DPE)

Michala Lander GHD

Chris Bain Ethos Urban

Dylan McCallum, Ron Meyer Land and Housing Corporation (LAHC)

Raju Mangalam Sydney Water

Paul Wearne EPA

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided a brief update on the SSP Study process, summarised the feedback received to date on the draft baseline analysis and outlined recent meetings and work in progress.

AECOM gave two presentations, firstly to provide an update on stormwater modelling and options for flood mitigation and secondly to provide an outline of sustainability frameworks and criteria. There was time for group discussion on matters that need further consideration to progress technical work. The presentation was based on the findings from the draft baseline report.

#### **Workshop notes**

1	Flooding & Stormwater Management	
	AECOM presented an update on flood modelling and the need to adopt a range of stormwater management options to manage potential flooding impacts.	
	Discussion noted:	
	International best practice models (e.g. Atlanta / Eco Cells)	
	Spatial implications of required storage (at 4m deep, 7,000m² of area required to achieve total 30,000m²)	



- If Alexandria Park is part of the flooding solution, additional consultation will be required with City of Sydney as land owner
- Staging will be significant in terms of delivery of mitigation
- Need to integrate water quality measures with storage
- Potential to store below new roads noting that existing roads are constrained by utilities.

#### 2 Climate Risk

It was noted that AECOM need to:

- Consider beyond 2030 (completion) through operational life of the project
- Link interventions to the identified risks an Adaptation Plan is required
- Note links between seasonality / hot weather and crime / health events.

#### 3 ESD Framework

AECOM presented analysis confirming Greenstar as the most relevant sustainability framework for the precinct. In response, the following matters were discussed:

- LAHC confirmed that Greenstar Communities (GSC) rating for Ivanhoe is 6 Star for precinct, 5 star for buildings (design, not 'as built').
- Consider capacity to offset between categories of GSC requirements
- SSP Requirements alone likely to result in 5 Star GSC rating (TBC)
- Can commitment be carried forward to future owners/developers (consider governance mechanisms)
- Need governance measures to confirm long term continuation of initiatives
- Linkages between ESD strategy and District Plan / CoS strategies

### 4 Outcomes and Targets

#### Water

- Holistic consideration of potable/waste/recycled/stormwater
- Integrated Water Cycle Management
- Water in the landscape
- Precinct wide initiatives
- Should be seen as an asset, not a constraint

#### Waste

- Innovative technologies
- Governance and pricing
- Change management / community buy-in
- Consider merits of decentralised facilities (water and energy), particularly issues of scalability / staging. Examples to consider include:
  - Central Park
  - Barangaroo
  - Ivanhoe



- Affordability and social outcomes should be prioritised, given social housing focus of project
- Transport capitalise on Metro through active transport (e.g. walking & cycling)
- Passive Investments/Design
  - Solar and ventilation
  - Efficiencies in building design
  - Maintenance neutral
  - To help minimise operating cost to tenants
  - Built form and outdoor space

### 5 Broaden case study examples beyond energy and water to consider

- Transport (Aecom & Jacobs)
- Affordability (Hill PDA, Breathe)
- Social/Private housing mix (Hill PDA)
- Delivery of Social Infrastructure (GHD)
- C40 "Climate Positive Development" and other relevant case studies

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# Waterloo SSP Environment and Open Space Technical Innovation and Working Group – Meeting #2

#### Held on 21 September 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs, Jody Summers, Ian Cady, Vanessa Gordon UrbanGrowth NSW (UGNSW)

John O'Grady Cardno Robert Smart Arterra

Peter John Cantrill, Amy Bendall, Sophie Golding City of Sydney (CoS)

Mark Attiwill, Dylan McCallum, Ron Meyer LAHC

Bryony Simcox Roberts Day

Attendees

Mike Horne Turf
Dan Szwaj Turner
Arthur Smart Arup

Chris Bain Ethos Urban Laurence Johnson, Karen Sweeny City of Sydney

Palitja Woodruff, Aaron Nangle DPE
Kevin Peddie Wind Tech

Crosbie Lorimer, Chak Chan Clouston Associates

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided a brief update on the SSP Study process, summarised the feedback received to date on the draft baseline analysis and outlined recent meetings and work in progress.

Clouston's draft Open Space Report and presentation identified various potential locations for 'Primary' and 'Secondary' Public Open Spaces, in addition to various potential locations for 'Activity Streets', a George Street 'Boulevard' and 'Social Corners'. The presentation was based on the findings from the draft baseline report.

Workshop activities considered locational and/or performance criteria for key spaces.

#### Workshop notes

1	Primary Open Space	
1.1	Discussion about the locational criteria for primary open space noted the following considerations:	
	Existing tree locations	
	Size and availability of land	
	Community value of the existing open spaces, particularly Waterloo Green	
	Preferably adjacent to activating land uses	



- Potential for open space to facilitate or compromise the creation of a precinct activity centre
- Incorporate complementary land uses (in limited circumstances)
- Locations fronting McEvoy Street may not be suitable due to traffic conflict.
   However, a southern location has the potential to serve the broader district
- Centre of edge of Precinct central locations optimise access to whole of precinct
- Locations to the north and north-west corner maintain current open space associations of Waterloo Green
- North-west corner location is preferred from an open space perspective as it is a unified area that is level, flexible and well connected to public transport, but noting that it may have negative potential on unity of activity centre. Other benefits:
  - Address to Metro and activated by retail frontages
  - Potential to contribute to public space journey
  - Optimises opportunities for new dwellings to overlook park

#### 1.2 Potential Performance Criteria discussed included:

- 2 hectare size
- Solar access to 50% of space for 4 hours between 9am to 3pm
- 25% tree canopy Urban Forest policy High Quality high design specifications, soil depth, maintainability
- Durable design and trafficable surfaces required to accommodate high usage
- Must consider (and potentially mitigate) flood regimes
- Must consider catchment beyond the study area
- 3 dimension of public domain i.e. spaces on and within buildings
- Sky view down to open spaces
- Potential conflict between CEPTED (personal safety) and ecological value of midstorey vegetation.

#### 2 Secondary & Other Spaces

#### 2.1 Locational Criteria:

- Services and infrastructure
- Prefer to locate away from McEvoy Street
- Prefer to be level and well connected
- Less programmed/formal character
- Option 2
  - Potential to borrow character of figs in Mt Carmel and less impact on figs
- Option 3
  - Potential look out over former wetlands
  - Potential for tiered space on steeper site

Best to capitalise on borrowed space of Mt Carmel/Waterloo Oval. Effectively achieving two large spaces.



3	Boulevard
3.1	Locational Criteria;
	<ul> <li>George Street - to retain trees</li> <li>20 metres may not be sufficient width</li> <li>George St has many utility lines with more planned. Boulevard creates potential to better manage utilities and existing trees.</li> <li>Potential for asymmetrical street section</li> <li>Significant WSUD opportunities</li> <li>Should de-emphasise vehicle function in favour of active transport</li> </ul>



## Waterloo SSP Employment, Retail, Services, Arts & Culture Technical Innovation and Working Group – Meeting #2

#### Held on 26 September at UrbanGrowth NSW, MLC, Level 12

Vanessa Gordon

Matt Davis OGA

Allison Heller, Lisa Colley, City of Sydney (CoS)

Phil Raskall, Peter John Cantrill

Mark Attiwill, Dylan McCallum, Land and Housing Corporation

Ron Meyer

Bryony Simcox Roberts Day
Chris Bain Ethos Urban

Aaron Nangle Department of Planning and Environment

Wayne Gersbach, James Turnball Macroplan
Arthur Smart ARUP
Rachel Borrowman Balaringji
Lauren Harding, Carmen Lau GHD

Greg Stonehouse Milne and Stonehouse

Simon Bennett Sydney Metro

Krista McMaster DET

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided a brief update on the SSP Study process, summarised the feedback received to date on the draft baseline analysis and outlined recent meetings and work in progress.

Macroplan gave a presentation on analysis for retail and services floor space. GHD gave a presentation on preliminary needs analysis for social infrastructure and facilities. The presentations were based on the findings from the draft baseline reports.

There was time for group discussion on matters that need further consideration to progress technical work, including principles for socially sustainable delivery of community facilities and the spatial distribution of social and retail floor space across the precinct.

#### **Workshop notes**

**Attendees** 

	Retail floor space analysis	
1.	Macroplan presented two scenarios for non residential floor space:	
	- Between 23,500 - 24,000 m <sup>2</sup> with a hotel and 6,000 - 9,000 m <sup>2</sup> social floor space	



- Between 18,000 - 19,000 m<sup>2</sup> with a hotel and 6,000 - 9,000 m<sup>2</sup> social floor space.

To progress retail analysis, the following needs further consideration:

- Review Kings Cross supermarket size and carparking approach as a case study relevant to Waterloo
- Consider opportunities for placemaking and early staging for retail delivery
- Analyse current/future trends affecting retail behaviour and retail delivery models across the globe and potential implications for the precinct – e.g. online shopping increasing due to people being time poor
- Consider the social connectedness that would be facilitated by a main street approach
- Note falling car ownership in the City of Sydney and potential implications for retail models 5% increase in "car-lessness" between 2011 and 2016 census. Relationship between affordability and car ownership was also discussed
- Consider innovative retail models and phasing retail parking provision to provide upfront, but gradually reduce/phase it out over the 15-20 year delivery period.
- 2. GHD's presented an outline of social facility requirements. Government service providers were currently being consulted on their needs and further consultation was being planned for service providers and users. GHD noted the challenges associated with new delivery models, planning facilities to support a dense and diverse community, changing trends in delivery and operation of facilities and complex policy frameworks.

Discussion identified the following points to consider during the development of the study:

- How the social infrastructure floor space requirements would inform feasibility models
- How facilities could be delivered
- The need for an aged care in the facility and also how FACS supports tenants ageing in place
- The social and economic benefits of different facilities
- Possible economies of scale for teaching/manufacturing/making spaces.
- 2.1 Noting the Department of Education advice that planned school upgrades (Alexandria Park) will accommodate planned growth:
  - When known, test if the future dwelling mix and percentage of larger apartments (2 3+ bedrooms) impacts this analysis schools
  - Schools can act as the heart of a community and accommodate a range of other social functions.
  - A school within the precinct would avoid the need for children to Cross Botany Road and Wyndam Street
- 3. Principles in delivering social facilities to achieve social sustainability:
  - Clear defined purpose/intent for the facility
  - Use a placemaking overlay to define purpose (ie be the 'glue' and be culturally relevant)
  - Equitable access, both welcoming and for people with low mobility
  - Ensure adequate programing cater to demographic needs
  - Co-location health and wellbeing facilities/services. Need to refer to case studies of good delivery – not all facilities go together.
  - Whole of life governance model



	1
	Walkability as priority
	Flexibility – robust to change.
3.1	Suggested case studies included:
Kings Cross, London – Developer hold and subsidised rent	
	King Street, Newtown – welcoming, diverse, integrated facilities
	Ryde - The Edge and Brisbane City Library – innovative
	Sweden – primary and aged care
	CEAD Centre – North Eveleigh
	Services NSW – customer centric model and joined services.
4.	Considerations raised for the spatial distribution of social and retail uses:
Activate the north south link along George Street	
	<ul> <li>Metro opportunity for a hub of activity with key social and retail uses</li> </ul>
	Opportunity for Cope street to focus night time economy
	ATP to Dank Street link – draw energy down along George Street
	Cluster community facilities
	Pull apart 'anchors' to activate spaces between
	A secondary supermarket and activated streets
	Steep topography can be a barrier to activation
	<ul> <li>Parks and retail don't always work well together – some retail like cafes can support large parks but not all retail</li> </ul>
	Provide integrated community spaces and green spaces



# Waterloo SSP Housing Diversity and Livability Technical Innovation and Working Group – Meeting #2

#### Held on 14 September 2017 at UrbanGrowth NSW, MLC, Level 12

Jody Summers, Nick Hill, James

**Bichard** 

Peter John Cantrill, Ian Hay City of Sydney (CoS)

Palitia Woodruff Department of Planning and Environment

(DPE)

Attendees Marjorie Ferguson Hill PDA

Marina Goncalves Tribe

Jason Twill Breathe

Ron Meyer, Dylan McCallum, Timothy

Land and Housing Corporation (LAHC)

Chee Turner
Pan Sawai Arup

Dan Szwaj Arup
Arthur Smart Ethos Urban

**David Attwood** 

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided a brief update on the SSP Study process, summarised the feedback received to date on the draft baseline analysis and outlined recent meetings and work in progress.

Hill PDA and Breathe provided presentations on housing mix options and innovative housing models respectively based on the findings from the draft baseline report. There was time for group discussion on matters that need further consideration to progress technical work.

#### Workshop notes

#### 1. | Social housing mix options

Hill PDA presented a number of social housing mix options and case studies showing how different options had been applied. Options with varying degrees of integration between private, affordable and social housing included:

- Building scale salt and pepper mix
- Building scale stacked
- Block scale separate buildings
- Precinct scale banded.

The presentation outlined the opportunities and constraints associated with different options. Discussion focussed on the issues arising from different options.



It was noted that the example of Regents Park, Toronto (Canada) is a hybrid model where individual small blocks are only separated by lanes.

There was a suggestion to analyse other case studies, including:

- Stacked typology with private/affordable, private/social, social/affordable mix look at New York and London
- Models for public and private open space within a mixed community public domain plays a key role in integrated communities

Housing mix options need to be objectively assessed:

- Governance could be problematic for salt and pepper options within buildings
- Note that CHPs, including City West, prefer a separate asset
- 'Tenure blind' design is a key consideration
- Could explore models with separate stratum but with shared assets and amenities
- Need to take into consideration the management of different needs
- Staging of the break-up of blocks is a key consideration. Need to consider whether the masterplan can achieve an approximate 70/30 mix in each stage or overall across the precinct.
- Evolution of different housing mix models over the life of the project is a key consideration
- Additional model to consider separate blocks with a fine grain block structure
- Management of open space access, management and perceptions need to be taken into consideration

Fundamentals of a good social mix were noted as:

- Communal open spaces
- Shared community facilities
- Block level performance criteria
- Tenure blind design
- Avoid "the poor door" approach

### 2 Innovative housing delivery models

Breathe gave a presentation on different housing delivery models and highlighted case studies including Pocket Living and Nightingale and different models for achieving housing affordability, including citizen, architect and developer led models and government enabled models.

Implications of innovative housing models for the masterplan:

- Need to ensure flexibility of design and zoning controls to meet different resident needs (e.g. aged housing) and encourage innovation in the market
- Need regulatory framework that balances flexibility and certainty
- Consider how to maintain established sub-cultures within single buildings/blocks to minimise impact on vulnerable tenant communities
- Identify different needs of private, affordable and social tenures because they can manifest as different physical building requirements, noting that LAHC requires Silver Level of Universal Housing Standards for social housing



- Planning controls need to provide for different building typologies
- Controls need to respond to the long term nature and context changes associated with the 15-20 year project timeframe
- Communities Plus objectives will be realised with the proposed mix of housing

#### 3 Further work:

- Develop performance measures
- Identify specific social housing models to benchmark
- Identify hurdles to delivery of innovative housing models and explore potential solutions
- Consider early engagement with CHPs
- Elevate consideration of liveability measures



# Waterloo SSP Environment and Open Space Technical Innovation and Working Group – Meeting #1

#### Held on 12 July 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs, Jody Summers, Ian Cady, Vanessa Gordon UrbanGrowth NSW (UGNSW)

Roger Swinbourne AECOM Robert Smart Arterra

Peter John Cantrill, Amy Bendall, Sophie Golding City of Sydney (CoS)

Adriana Malin, Dylan McCallum, Timothy Chee LAHC

Bryony Simcox, Martine White Roberts Day

**Attendees** Brigitta Schyns, Mike Horne Turf

Palitja Woodruff DPE
Kevin Peddie Wind Tech
John O'Grady Cardno

Ali Naghizadeh, Peter Georgious SLR Consulting Will Introna, Mitchell Scott EcoLogical

Crosbie Lorimer Clouston Associates

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided background context and outlined the project objectives and the purpose of the technical innovation and working groups to support collaboration between key government stakeholders and the project team.

Consultants provided a short summary of findings from their work to date to identify issues, opportunities and constraints for the SSP planning process.

Members of the working group then discussed issues that needed further consideration and opportunities to align technical studies.

	What	Who	When
1	Urban Forest		
1.1	As part of next phase, open space design needs to be integrated with urban forest planning to consider:	Turf/Arterra	Note
	<ul> <li>a. Low, mid and upper canopy landscaping</li> </ul>		
	b. Shadow impacts of figs on:		
	- amenity of lower level apartments		
	- useability of open space		



	n n n n n n n n n n n n n n n n n n n		
	c. Relationship between mid canopy landscaping and CPTED		
	As part of next phase, consider an integrated approach to street profile design with consideration of utilities, trees, drainage, cycle paths, lighting etc	ARUP/Turner/Turf with key consultants	Note
1.2	Urban forest and infrastructure baseline reports to be updated to consider potential impact of utilities, including stormwater detention, on trees – detention difficult if trees are retained	Arterra/AECOM/design team	August 2017
1.3	Heritage and arts/culture studies to give consideration to social significance of trees in baseline reports	Urbis and Milne and Stonehouse	August 2017
2	Open space		
2.1	Open space needs report to confirm prevailing policy framework for open space provision, including guidelines for quantity and proximity	Clouston	August 2017
2.2	Consider CoS preference for a single large open space with street frontages to all sides through design development	Clouston/design team	Note
2.3	<ul> <li>Open space needs report to consider:</li> <li>a. Contribution of existing green spaces with social value – e.g. community gardens, street corners, pocket parks</li> <li>b. Separate roles of public open space, streets, communal open space</li> <li>c. Value of trees within streets, but note they do not constitute "open space"</li> <li>d. Open space needs of existing and future population, including different cultural and life-stage needs</li> </ul>	Clouston	August 2017
2.4	Align urban forest, flora and fauna and wind analysis with landscape design to strengthen open space and streetscape outcomes	Turf with Arterra, EcoLogical and Wind Tech	Ongoing
3	Visual impact		
3.1	Visual impact baseline study to note:  a. Important relationship between long, straight streets and grid pattern and view lines  b. Contribution of trees and open space to visual amenity	Cardno	August 17
3.2	As part of next phase design process to consider transitional built forms between low and high rise and avoid tall continuous walls	Design team	Note
4	Wind		



4.1	Wind study to give consideration to impact of existing mature trees on current wind patterns	Wind Tech	August 2017
4.2	Next phase design development to consider:     a. Dense landscape buffers to deflect wind up and over buildings and need to protect landscape areas from wind until they are established     b. Avoiding north-south and east-west walls of continuous built form	Turf/ ARUP/ Turner	Note
5	Noise, vibration, pollution and lighting		
5.1	As part of next phase, liaise with urban design team, Jacobs and AECOM to consider residential amenity impacts of:  - Traffic volumes and building set backs Ttraffic calming - Waste services/trucks	SLR	Note
5.3	Noise, vibration, pollution and lighting baseline study to consider:  a. Impact of planned changes to arterial roads on noise and air e.g. McEvoy Street and WestConnex  b. Impacts of shift in travel mode from cars to public transport on air and noise	SLR	August 2017
5.4	Confirm vibration mitigation provisions for Metro station – attenuation pads or building design controls	UGNSW	August 2017



# Waterloo SSP Employment, Retail, Services, Arts & Culture Technical Innovation and Working Group – Meeting #1

#### Held on 12 July 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs, Jody Summers, Ian Cady, UrbanGrowth NSW (UGNSW)

Vanessa Gordon

Allison Heller, Lisa Colley, David City of Sydney (CoS)

Fitzpatrick, Phil Raskall

Adriana Malin, Dylan McCallum, Land and Housing Corporation

**Timothy Chee** 

Bryony Simcox, Martine White Roberts Day

Attendees Palitja Woodruff Department of Planning and Environment

Karyn Virgin Urbis
Wayne Gersbach Macroplan
Georgia Vitale ARUP

Georgia Vitale ARUF Michala Lander GHD

Sue Boaden Milne and Stonehouse

Phil Leitjen Sydney Metro
Rachel Tayler, Rachel Barrowman Balerinji
Kate Hickey Create NSW

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided background context and outlined the project objectives and the purpose of the technical innovation and working groups to support collaboration between key government stakeholders and the project team.

Consultants provided a short summary of findings from their work to date to identify issues, opportunities and constraints for the SSP planning process.

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	What	Who	When
1	Economic, Services and Retail		



1.1	Ensure	that economic, services and retail study	Macroplan	Note
		ers the following:	Macropian	11000
	a.	Typology of shops/retail for different demographics e.g. composition of retail for Central Park and Green Square reflects different community profile		
	b.	Retail, commercial, health and education (incl lifelong learning) uses to meet social mix needs		
	C.	Service needs and potential provision beyond the site boundary		
	d.	Aged care services to support elderly tenants		
	e.	Curation of retail to balance mix of higher end and lower end options to provide for diverse social mix		
	f.	Flexible parking models that allow transition away from car-based transport		
	g.	Cultural and heritage drivers to underpin economic growth		
	h.	Employment, retail and services approach that supports a more self-sufficient community aligned with urban design and transport outcomes		
1.2		e TIWG studies include aligned commentary in	MacroPlan, GHD	August 17
		ne reports covering the following:	and Milne	
	a.	Indication of economic and social development opportunities for tenants and retail/service provision (as per the Communities Plus objectives)	Stonehouse	
	b.	Principles for co-location of non commercial services (e.g. aged care and child care) to create mutually beneficial synergies		
	C.	Ensure coverage of demand for aged care services and facilities		
2	Social	Sustainability		
2.1	Ensure to:	e social sustainability study to gives consideration	GHD	Note
	a.	Future demographics and needs, including:		
	-	Mobile young and immobile older residents lifestyle		
	-	Permanent migrants (not just students)		
	-	Renters		
	b.	Principles and strategies to enable transition of uses as demographics change and to multi-use facilities		
	C.	Employment strategies and programs linked to mixed use cultural facilities		



	<b>1</b>		
	d. Lifelong learning facilities – not just schools (e.g. a digital literacy learning centre)		
2.2	Accelerate needs analysis with human services agencies, service providers and target population groups to feed into retail and facilities planning, specifically requirements for schools, community services, health services	UGNSW, LAHC and GHD	August 17
2.3	Meet with Education to consider:	UGNSW and GHD	August 17
	a. Current proposals for education in area and start to explore options for addressing future needs (including education facilities within the precinct)		
	b. Alternative models for early delivery		
	c. Multiple use education facilities co-located with other community facilities		
2.4	Marco plan and GHD to ensure that social sustainability analysis and employment, retail and services studies align needs assessments as part of baseline reports (as appropriate)	, .	August 17
2.5	UGNSW to provide clarity on approach to establishing 'mixed community' characteristics and demographics, as well as the evolution of population and employment assumptions throughout the SSP Study process	UGNSW with GHD/.id/Hill PDA/Macroplan	August 17
3	Heritage		
3.1	UGNSW to facilitate holistic analysis of key buildings (Matavai Turanga and Dyrsdale) in terms of:	UGNSW with Urbis, Milne and	August 17
	a. Social, community and cultural value	Stonehouse,	
	b. Architectural heritage	design team	
	c. Liveability and standards		
	d. Economic values, including lifecycle costs		
3.2	Urbis and Milne and Stonehouse to coordinate/align commentary in baseline reports on the following:	Urbis, Roberts DayMilne and	August 17
	<ul> <li>a. Link cultural heritage influences with cultural narrative to inform cultural planning to create Waterloo as a destination</li> </ul>	Stonehouse	
	b. Leverage heritage as a destination		
4	Placemaking, Arts and Culture		
4.1	Placemaking and arts and culture studies to give consideration to:	Roberts Day and Milne &	Note
	<ul> <li>a. Comparison of growth rates in arts and creative industries beyond Waterloo and possible social synergies/connectedness</li> </ul>	Stonehouse	
	c. A breakdown of producers, makers and design		
	d. Critical input of arts and culture to place-making	<u> </u>	



4.4	UGNSW to facilitate liaison between Balarinji, Milne and	UGNSW with	Ongoing
4.4		OGNSW WITH	Oligoling
	Stonehouse, Roberts Day, Urbis and GHD to look at the	Balarinji/Milne &	
	community stories, particularly in terms of aboriginal	Stonehouse/	
	stories and culturally and linguistically diverse groups	Roberts Day/	
	within Waterloo to ensure stories and significance	GHD	
	recorded to inform design and future strategies		



# Waterloo SSP Sustainability and Infrastructure Technical Innovation and Working Group – Meeting #1

#### Held on 7 July 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs, Nick Graham, Nick Hill, Ian UrbanGrowth NSW (UGNSW)

Cady, James Bichard

Roger Swinbourne, Daniel Fettell, AECOM

**Anthony Davies** 

Georgia Vitale ARUP Ed Bourke Ausgrid

Anna Mitchell, Sean Kaufman City of Sydney (CoS)

Attendees

Palitja Woodruff Department of Planning and Environment

(DPE)

Michala Lander GHD Chris Bain JBA

Mark Attiwill, Dylan McCallum, Timothy Land and Housing Corporation (LAHC)

Chee

Raju Mangalam Sydney Water

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided background context and outlined the project objectives and the purpose of the technical innovation and working groups to support collaboration between key government stakeholders and the project team.

Consultants provided a short summary of findings from their work to date to identify issues, opportunities and constraints for the SSP planning process.

Members of the working group then discussed issues that needed further consideration and opportunities to align technical studies.

	What	Who	When
1	Sustainability		
1.1	Given number of agencies with policy frameworks there is a need to resolve which are applicable to Waterloo.	UGNSW	August 17
	Need to accelerate the preparation of a sustainability framework to guide the SSP Study.		



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	UrbanGrowth NSW to facilitate meeting with LAHC, CoS, AECOM, SWC to agree approach to establishing:		
	a. Sustainability principles,		
	<ul> <li>b. Applicability of rating tools/frameworks</li> </ul>		
	<ul> <li>Targets for energy, water, environment and waste and relationship to project performance measures</li> </ul>		
	<ul> <li>d. Targets should align with and cover transport, utilities and urban forest/ecology and the social sustainability study</li> </ul>		
1.2	Sustainability study baseline analysis to provide benchmarks covering:	AECOM	August 17
	<ul> <li>Demand for precinct wide utility systems and their spatial requirements, including consideration of decentralised systems</li> </ul>		
	<ul> <li>Governance mechanisms for multiple development entities to participate in precinct wide systems</li> </ul>		
	<ul> <li>Reduced carbon pathways and likely impact on project feasibility, housing affordability and cost of living</li> </ul>		
	<ul> <li>d. Case studies for projects achieving 50% renewable energy/share outcomes</li> </ul>		
	e. Waste management options		
	f. Clearly articulate lessons learned from		
	above and challenges and opportunities for Waterloo and ensure that cross study issues are picked up		
2	Utilities		
2.1	Utilities, urban forest and streetscape design need to be coordinated	AECOM, Arup and Arterra	Note
2.2	Ongoing coordination needed around staging for development and associated infrastructure upgrades throughout design and planning process	AECOM, ARUP/Turner, Utility providers	Note
2.3	Infrastructure baseline report to cover the following:	AECOM	August 17
	<ul> <li>a. Integrated services planning for drainage, potable and wastewater and WSUD</li> </ul>		
	b. Climate change and flooding risk		
	<ul> <li>NSW Office of Water requirements for working below the water table (include as key stakeholder?)</li> </ul>		
2.4	Accelerate work to identify a preferred stormwater management approach	UGNSW	August 17



	Workshop with CoS, SWC, AECOM, Metro and utility providers to be scheduled to identify and assess options		
	Following this workshop, hold a further meeting with Ausgrid, SWC, AECOM, Turner, Turf, ARUP, CoS, EPA, Metro to explore flood storage options at Alexandria Park		
2.5	Identify lessons learnt from Victoria Park and Green Square regarding staging, constructability, car parking, utilities provision and management of contamination and share with AECOM. Include commentary in baseline report	LAHC (MA) and UGNSW	August 17
3	Contamination and geotechnical		
3.1	Ensure contamination sampling approach to confirm extent and nature of contamination is coordinated with development options where basements/utility trenching etc are likely	AECOM	Note
3.3	Geotechnical and contamination baseline report to provide advice to urban design team regarding engineering considerations for basement design given water table and contamination	AECOM	August 17
3.4	Geotechnical and contamination baseline report to give consideration to:  a. Remediation required around trees and provide advice to Arterra for urban forest study  b. Reuse of excavated materials and associated need for management plans  c. Whether groundwater quality monitoring is required at this stage	AECOM	August 17



## Waterloo SSP Housing Diversity and Livability Technical Innovation and Working Group – Meeting #1

Held on 10 July 2017 at UrbanGrowth NSW, MLC, Level 12

Nick Graham, Ian Cady, David Johns, UrbanGrowth NSW (UGNSW)

Jody Summers, Nick Hill, James

Bichard

City of Sydney (CoS) David Fitzpatrick, Ian Hay

Hill PDA Marjorie Ferguson **Attendees** 

Hannah Tribe Jason Twill **Breathe** 

Dylan McCallum, Timothy Chee Land and Housing Corporation (LAHC)

Tribe

Karl May Turner

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided background context and outlined the project objectives and the purpose of the technical innovation and working groups to support collaboration between key government stakeholders and the project team.

Consultants provided a short summary of findings from their work to date to identify issues, opportunities and constraints for the SSP planning process.

Members of the working group then discussed issues that needed further consideration and opportunities to align technical studies.

	What	Who	When
1	Housing Diversity and Affordability		
1.1	Study baseline needs to fully address different models of affordable housing provision and the relative issues, opportunities and constraints for Waterloo  The following was raised for consideration:	Hill PDA	August 17
	<ul> <li>Options to hold for 10 years, 20 years or in perpetuity and management arrangements (CHP involvement in Strata an issue)</li> </ul>		
	<ul> <li>Discuss potential to reduce affordable (and social) cost through sharing laundries and common amenities, reducing parking rates/decoupling, reducing apartment size</li> </ul>		



			,
	<ul> <li>Different benchmarked models, including Commons Melbourne and Pocket Living London and Urban Land Institute precedent studies</li> </ul>		
	<ul> <li>Affordable living and share economies "Where we live" model of share economy housing raised by Jason Twill</li> </ul>		
1.2	The Housing Diversity and Affordability Study needs to objectively assess social housing needs (i.e. tenant mix) and delivery options with reference a robust evidence base and the Communities Plus approach including:	Hill PDA	August 17
	Separate buildings		
	<ul> <li>Parts of same buildings (e.g. section of podium/tower)</li> </ul>		
	<ul> <li>True salt and peppering throughout development</li> <li>The assessment should consider:</li> </ul>		
	<ul> <li>Matching tenant needs to housing type, and flexibility to change housing type (e.g. dual key, innovative construction methods)</li> </ul>		
	<ul> <li>Approach to delivering 70/30 mix and staging</li> </ul>		
	<ul> <li>Tenant, developer and investor/owner occupier views/ impact on private housing prices</li> </ul>		
	<ul> <li>Management arrangements, including tenant access to shared facilities/open space,</li> </ul>		
	<ul> <li>LAHC/CHP ability to be involved in strata schemes (fees etc)</li> </ul>		
1.3	The study baseline needs to consider the mixed community profile to inform housing diversity and affordability needs assessment. UGNSW to provide clarity on approach to establishing 'mixed community' characteristics and demographics, as well as the evolution of population and employment assumptions throughout the SSP Study process	UGNSW with Hill PDA, GHD, MarcoPlan, .ID	August 17
	Baseline should also discuss how a diverse mix of social, affordable and market housing can change over time to respond to different demographics and product needs		
1.4	Study baseline needs to consider aboriginal housing management and provision and needs as part of the mix	Hill PDA	August 17
1.5	Consider implications of potentially reduced apartment sizes on need for retail, recreation, entertainment, community and other services as part of next phase	Macroplan, Clouston & GHD	Note
1.6	Consider youth and employment opportunities through Community Housing Providers as part of next phase	Macroplan	Note



1.7	Review attendees and purpose of the TIWG. Consider inclusion of economics and retail (Macroplan) and social sustainability (GHD) to address livability issues	UGNSW	August 17
1.8	Breathe to liaise with Clouston to explore relationship between diverse housing products and private, semi private and public open space needs analysis	Breathe and Clouston	August 17



### Waterloo SSP Transport, Streets and Connectivity Technical Innovation and Working Group – Meeting #1

### Held on 6 July 2017 at UrbanGrowth NSW, MLC, Level 12

Abbie Jeffs. Nick Graham, James UrbanGrowth NSW (UGNSW)

Bichard, Matthew White, Ian Cady

Roger Jefferies **AECOM** Chris Schmid **AMP** Robert Smart Arterra

Peter John Cantrill, Andrew Aspden City of Sydney (CoS)

Aaron Nangle Department of Planning and Environment

(DPE)

Family and Community Services (FACS) **Attendees** Michael Modder

> Jacobs **Cameron Steurt** JBA Chris Bain

Land and Housing Corporation (LAHC) Adriana Malin, Mark Attiwill, Dylan

McCallum, Timothy Chee

Metro Phil Leijten, Imogen Markus

NSW Police Force (Redfern) Maria Flood Transport for NSW (TfNSW)

Neill Miller, Reinalin Bito-on, Shane

Schneider

UrbanGrowth NSW welcomed attendees to the working group and reviewed the agenda.

UrbanGrowth NSW provided background context and outlined the project objectives and the purpose of the technical innovation and working groups to support collaboration between key government stakeholders and the project team.

Consultants provided a short summary of findings from their work to date to identify issues, opportunities and constraints for the SSP planning process.

Members of the working group then discussed issues that needed further consideration and opportunities to align technical studies.

	What	Who	When
1	Transport		
1.1	Transport study to give consideration to:  a. Botany Road freight network  b. On-street and off-street parking	Jacobs	Note
	schemes		



	a Interface between nedectrions and		
	c. Interface between pedestrians and vehicles (incl. kiss and ride) on Cope Street around Metro		
	d. Cumulative impact of congestion from development in surrounding area on local streets		
	e. Identifying ways to limit rat runs on local streets by reinforcing function of Botany Road		
	f. Mode share for social trip generation (in data available)	F	
	g. Construction staging and impact on road network capacity		
	h. Requirements for end of trip and bike share facilities		
	<ul> <li>i. Emergency services access to properties</li> </ul>		
	j. Impact of WestConnex on Botany Road		
	k. RMS proposed street widening and		
	shared path on McEvoy Street with upgrade to McEvoy Street and Botany Road intersection		
	Demand for east-west and north-south connections – all modes		
	<ul> <li>m. Space requirements for residential servicing, including removal vehicles, white good deliveries, waste collection, supermarket home deliveries and courier deliveries.</li> </ul>		
1.2	Meet with Metro, RMS, TfNSW and the urban design team to consider the Botany Road and Metro interface/interchange	UGNSW and Jacobs	July 17
1.3	Accelerate identification of travel task and road hierarchy to feed into multi-function street design	Jacobs	August 17
1.4	As part of design process, consider road closures/openings on safety, amenity and placemaking. Explore 'superblock' concept with activity focussed within block and not on McEvoy and Botany edges	Jacobs	Note
1.5	Jacobs and the urban design team to analyse and include in baseline reports:	Jacobs/design team	August 17
	a. North – south pedestrian and cycle routes and crossings to key destinations including Redfern and Green Square stations and ATP, and		



	include this commentary in baseline reports  b. Analyse Metro station, bus, walking and cycle networks to, from and within the precinct in the context of whether there is sufficient provision for young, elderly and school populations and include commentary in the baseline report.  As part of next phase engage with TfNSW and Department of Education to consider the cost benefit of education facilities within the precinct.		
1.6	SLR, with Jacobs and design team, to analyse and recommend Botany Road noise mitigation measures for residential design on metro quarter and include aligned commentary in baseline reports	Jacobs, SLR and design team	July 17
2	Urban Forest		
2.1	Arterra and AECOM to consider utility trench upgrade approaches that minimise impact on on tree root zones and include aligned commentary in baseline reports	Arterra and AECOM	August 17
2.3	Urban forest report to include commentary in the baseline report on the following:  c. RMS proposed street widening on McEvoy Street on trees  d. Setbacks and impact on trees with 10 and 20 m sensitivity testing (Note RMS and CoS different views on road setbacks for trees)	Arterra	August 17
2.4	Open space, urban forest and design team studies to consider role of community gardens within network of open space	Clouston/Urban forest/design team	Note