Celestino Developments SSP Pty Limited
ABN 67 607 351 842

642 Great Western Highway
Pendle Hill NSW 2145
PO Box 438
Pendle Hill NSW 2145

t 02 9842 1218
f 02 9842 1059
e info@celestino.net.au
w celestino.net.au

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Director - Transport Assessments
Planning and Assessment
Department of Planning, Industry and Environment
Via the NSW Planning Portal

Dear Director

Sydney Metro - Western Sydney Airport (SSI-10051)
Submission on the Environmental Impact Statement dated October 2020

Executive Summary

This letter has been prepared by Celestino Developments SSP Pty Limited (**Celestino**), the developer of Sydney Science Park (**SSP**), to provide feedback on the Sydney Metro – Western Sydney Airport Environmental Impact Statement (**EIS**).

Celestino, and the Sydney Science Park project, is aligned to and supports Sydney Metro's project objectives. The review of the EIS has indicated areas of concern relating to planning, urban design, traffic and placemaking. In Celestino's experience and using industry best practice examples, the following items are all resolvable through a collaborative process between Celestino and Sydney Metro. In summary, the key items raised in our submission include:

- a clash of planning/urban design outcomes between current Penrith LEP controls, the proposed designs in the Metro EIS and Western Sydney Draft Aerotropolis Precinct Plan for Northern Gateway.
- considerations of the viaduct design and resultant land use outcomes and amenity at the ground level
- traffic modelling and land use forecast assumptions to be reviewed
- existing site access for development of SSP is not impacted by Sydney Metro's construction or operational activities
- locations and number of signalised intersections on Luddenham Road
- the multi-nodal transport connections are well considered, including review of the commuter carpark to a more appropriate location for its customers.

Background

Celestino is supportive of Sydney Metro's project objectives as stated in the EIS:

1. Safe and customer focused transport service
2. Successful airport and Western Parkland City
3. Attracting knowledge and internally competitive jobs
4. Realising the 30-minute city
5. Great places with an increased housing supply
6. Delivering a value for money solution

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These objectives align with Celestino's vision for SSP. In addition, SSP is being master planned to deliver similar objectives to the Sydney Metro project and the Western Sydney Aerotropolis Plan (being Productivity, Sustainability, Infrastructure Collaboration, Liveability).

Sydney Science Park

SSP is a multi-billion dollar mixed-use smart city that will create an internationally recognised epicentre for research, development, education, commercialisation and innovation in the heart of Western Sydney at Luddenham. SSP has the vision to be a vibrant, integrated and sustainable city, founded as a centre for disruption and innovation, where people can innovate, learn, live, play and trade in a connected and responsive community.

SSP was zoned by Penrith City Council and State Government in 2016 to allow flexible mixed-use areas within its unique B4 and B7 zones. The range of permitted uses enables a broad mix of activities including residential and retail across the site. Of the 287 hectares of zoned area, 191 hectares is zoned B4 and B7 with the balance being open space. The image at Figure 1 shows the potential layout of SSP under its current zoning.

The current zoning allows development of 3,400 dwellings (low to high density dwellings), 30,000sqm retail GFA and commercial and employment space with building heights up to 24m, which can deliver a broad range of uses and GFA in excess of 440,000sqm. There is no cap on employment GFA and accordingly, intensification of uses within the current zoning, could realise GFA closer to 1 million sqm. The open space is designed to allow for district level recreation and sporting facilities.

Figure 1

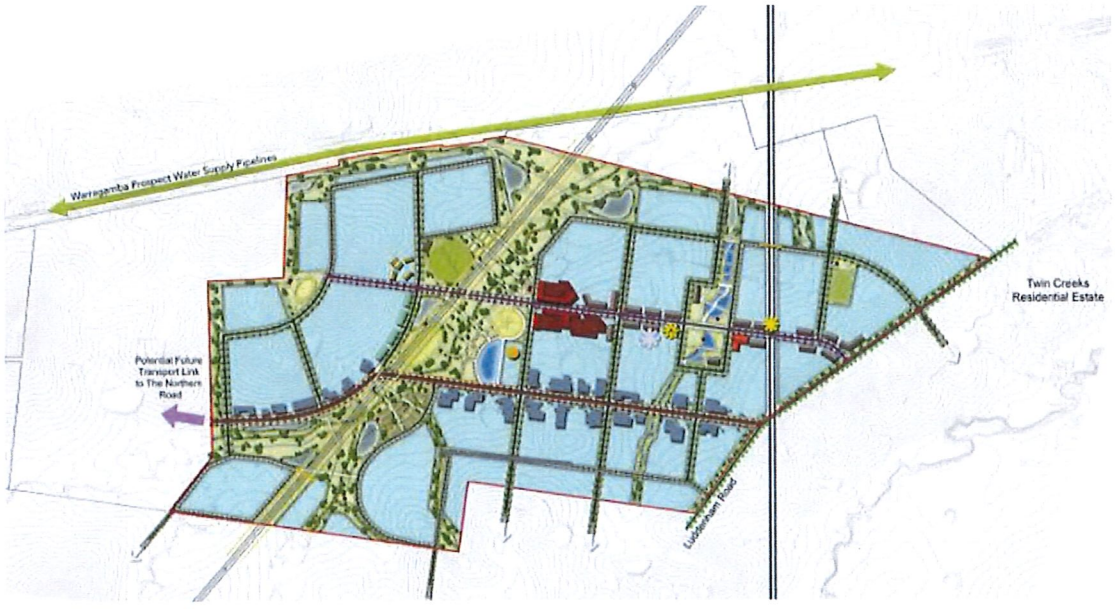


Image from Penrith Development Control Plan 2014

Celestino is ready to activate and deliver a 24-hour city.

Celestino's comments on the EIS are from the perspective of realising the vision for SSP whilst considering Sydney Metro's objective and its criteria for station optimisation and design guidelines.

Figure 2 below shows the location of the proposed Sydney Metro corridor and station within SSP project (red outline).

Figure 2

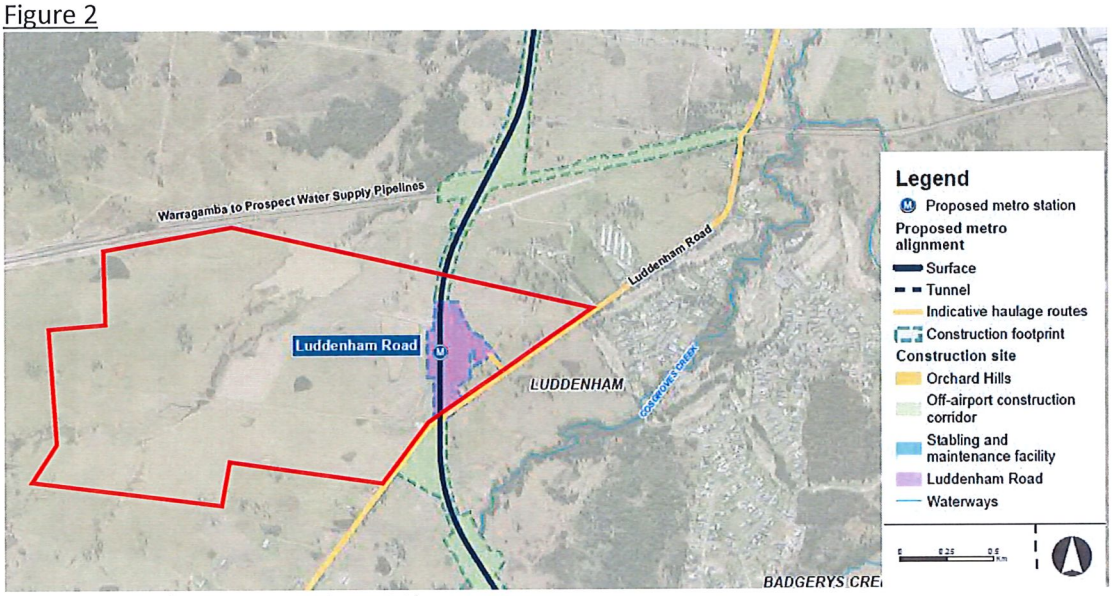


Image from Metro EIS Figure 8.2b

Celestino's submission on the EIS

The following comments on the EIS align with the following elements of Sydney Metro's Design Guidelines Principles:

1. Interface and Activity
2. Connectivity
3. Placemaking
4. Transport Network

Interface and Activity, Connectivity, Placemaking

Celestino is supportive of the strategy to integrate the Sydney Metro station within the wider development precinct. As noted in the EIS, the Western Sydney Aerotropolis Plan indicates the need to align placemaking and the land use planning principles. For the success of the Sydney Metro station precinct placemaking, an understanding of the needs and principles for each of the three strategies (outlined below) should be carefully considered.

Celestino would also like to highlight a planning mis-alignment of the urban design, placemaking and transports aspects of the existing SSP zoning, the Sydney Metro EIS and the Western Sydney – Draft Aerotropolis Precinct Plan for Northern Gateway (released on 10 November 2020). The following section highlights the issues around the Sydney Metro station at Luddenham.

The current zoning of SSP, the maps contained in the proposed Northern Gateway Precinct Plan and the maps contained in the EIS (refer Figures, 1, 3 and 4 respectively) all show different orientation and layouts of roads and intersections with Luddenham Road. Celestino would like to discuss the proposed road layouts (structure) and intersections connecting to Luddenham Road with Sydney Metro and Western Sydney Planning Partnership.

Figure 3

Image from Northern Gateway Precinct Urban Design and Landscape Report, Page 65

Figure 4

Sydney Metro - Urban Design Images - Page 35 of Appendix E- Design Guidelines - EIS

Action No 1 - Sydney Metro to work with Celestino & WSPP to resolve the urban design and road network, including intersections with Luddenham Road.

Sydney Metro Viaduct Design

Celestino would like to understand Sydney Metro's activation strategy for the space under the rail corridor viaduct. Safe and useable spaces that provide easy connectivity and permeability across the corridor would be supported.

The locations of the viaduct columns should be considered and located in appropriate locations to minimise impacts to the surrounding area. Celestino would like to understand the interface between the Sydney Metro viaduct and the finished levels of Luddenham Road upon completion of the Sydney Metro in 2026. Sydney Metro should also take into consideration the ultimate Luddenham Road levels.

> Action No 2 - Sydney Metro to work with Celestino & WSPP to resolve the viaduct column locations relative to the street layout and how the space under the viaduct is activated.

Transport Network

A. Traffic modelling assumptions

Technical Paper 1 states at section 2.4.4 that forecast traffic growth during the future operational years 2026 and 2036 is based on the land use projections released by TfNSW in 2014 (LU14 standard land use scenario) as well as the operation of the Western Sydney International Airport and the business park. These key land use forecasts are likely to be outdated and do not align with the land use forecasts adopted within the Greater Sydney Regional Plan, Western Parkland City District Plan and Future Transport 2056.

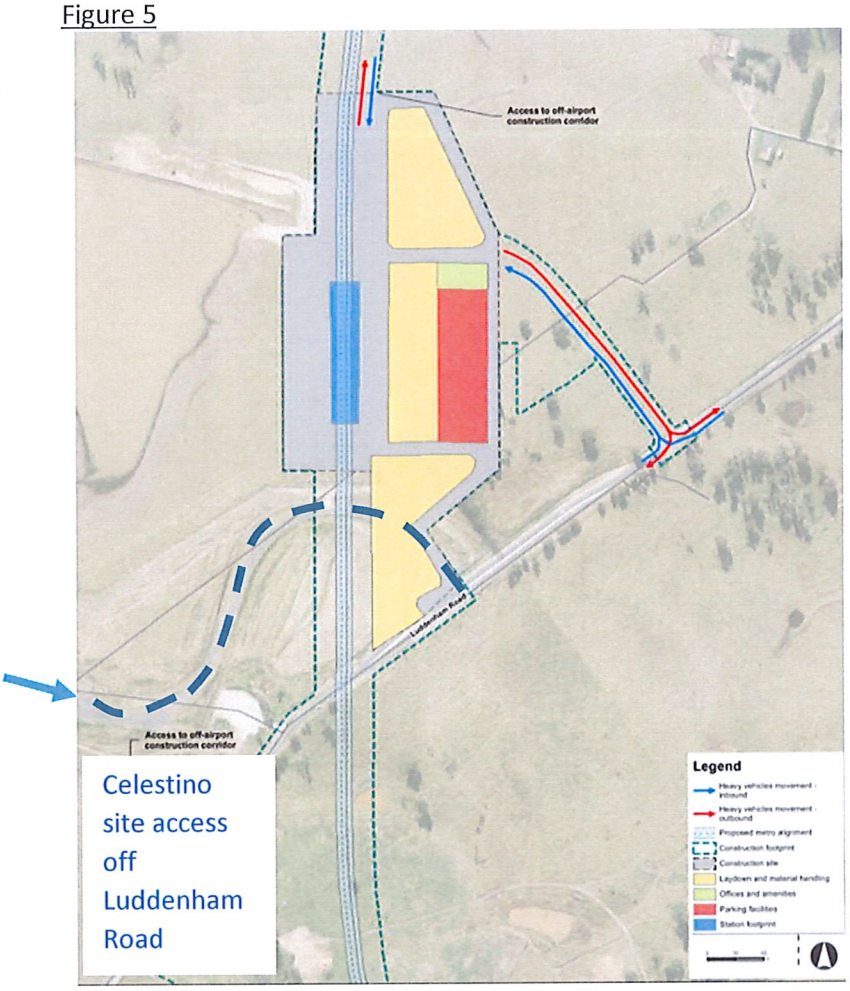
> Action No 3 - Confirm it will update its traffic modelling assumptions to latest land use scenarios.

B. Construction traffic impacts and integration

a. Celestino is planning to start construction at Sydney Science Park in 2021.Figure 5 (Figure 8-22 provided in Chapter 8 – Project Description – Construction of the EIS) outlines Sydney Metro's intended use of the site during construction. The image also shows Celestino's current access (dotted line) to the project from Luddenham Road. Celestino needs to be assured that its current access from Luddenham Road will be maintained throughout Sydney Metro's construction and operation.

> Action No 4 - Sydney Metro to undertake further consultation to confirm staging to ensure SSP access is not restricted for either construction or operation from the Celestino site access off Luddenham as delineated in the figure below.

Figure 5



(Figure 8-22 Chapter 8 – Project Description – Construction – EIS)

b. Technical Paper 1 indicates (section 6.2.1 and 8.1) that "During the peak year of construction, sections of Mamre Road and Luddenham Road are forecast to operate at their theoretical capacity due to the increase in background traffic demand along these corridors. The addition of construction traffic expected to be generated by the project during the peak year of construction is forecast to impact Luddenham Road during the PM peak, as well as Badgerys Creek, Elizabeth Drive and The Northern Road during both peak periods".

c. Technical Paper 1 does not propose mitigation measures to manage this impact. This issue will also impact traffic utilising Luddenham Road for access to SSP.

Action No 5 - Sydney Metro to consider and identify appropriate mitigation measures to achieve acceptable levels of service taking into consideration the cumulative impacts of the works proposed and the construction and operational traffic forecast for SSP.

d. The proposed rail alignment and bus layover location (Figure 5-7 in Technical Paper 1) impacts the existing SSP road access. This access will be utilised for both construction and operational access.

Action No 6 - Sydney Metro to undertake further consultation to confirm staging to ensure SSP access is not restricted for either construction or operation from the Celestino site access off Luddenham Road as delineated in Figure 5.

C. Operational traffic integration

a. Technical Paper 1 proposes the localised upgrade of Luddenham Road at two locations to support provision of construction access and subsequent permanent access arrangements into the Luddenham Road Station precinct (section 5.3.1 of the EIS).

b. Technical Paper 1 outlines that in the Luddenham Road precinct, the provision of traffic signals including signalised pedestrian crossings at the intersection of Luddenham Road and the Future Precinct Street (north) and Luddenham Road and the Future Precinct Street (south) may be required to permit vehicle movements into the station precinct. These upgrades may include provisions for an additional approach, pedestrian and bicycle crossings and potential bus priority. The proposed modifications are outlined as:

   i. provision of new signalised intersection and pedestrian crossing to facilitate vehicles and pedestrian movements into the station precinct at a new precinct street (north) and Luddenham Road intersection
   ii. provision of new signalised intersection and pedestrian crossing to facilitate vehicles and pedestrian movements into the station precinct at a new precinct street (south) and Luddenham Road intersection
   iii. provision of unsignalised intersection at the station car park.

   These proposed road modifications do not align with proposed roads connecting from SSP to Luddenham Road outlined in Penrith Council's Development Control Plan 2014 and the Western Sydney Planning Partnership Precinct Plans. While multiple signalised connections to Luddenham Road will improve connectivity we ask that these road connections be optimised and coordinated with SSP and the broader area planning outcomes.

Action No 7 - We request that further consultation is undertaken with Celestino, Penrith Council and WSPP to resolve the number of and optimal locations of key road connections, spatial / layout requirements, and intersection designs based on Sydney Metro and needs.

D. Public transport

a. Celestino is supportive of potential additional regional bus services that may be provided by TfNSW within the study area to enable connectivity between surrounding local and regional centres (section 5.1.2). Opportunities should be explored to connect the internal interchange road to the north of the station (refer Figure 6 for further context). This could allow internal bus access from the interchange into SSP without the need to travel back via Luddenham Road.

Figure 6

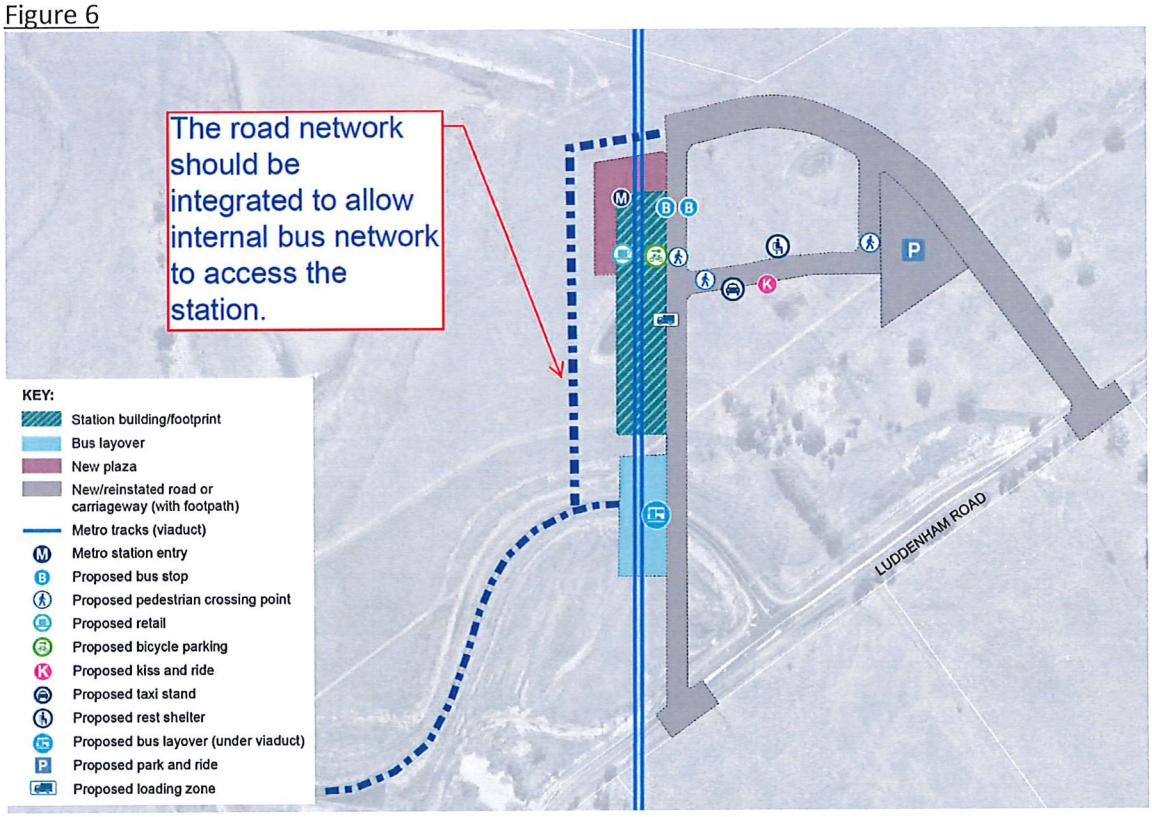


Figure 7.23 Chapter 7 – Project Description – Operations - EIS

b. The interchange layout plan identifies a location of a bus layover area to the south of the North Luddenham Station. Celestino would like to understand the following in relation to the proposed bus layover:

i. The spatial dimensions and any requirements for bus driver facilities
ii. The type and function of the layover (e.g. recovery, positioning, driver breaks etc)
iii. The overall capacity requirements of the bus layover
iv. The number of bus movements and circulating patterns within the interchange (and whether these have been included in the operational traffic analysis of key intersections along Luddenham Road).

Action No 8 - Celestino requests Sydney Metro clarify the bus routes internally through SSP to ensure appropriate bus capable street layouts can be provided and coordinated with Sydney Metro's and the Western Sydney Planning Partnership masterplan.

E. Walking and Cycling

Within Section 5.1.2 Sydney Metro is encouraged to further define design integration for the precinct to ensure high quality walking and cycling connectivity.

Action No 9 - Celestino considers that 60 bike parking spaces is a relatively low provision given the scale of the precinct and we would support higher provision of high-quality facilities (section 5.1.2).

F. Station demand

Technical Paper 1 indicates at section 5.1.2 (page 103) that "preliminary forecasts for the 2036 AM peak hour indicate about 350 customers entering and about 560 customers exiting the station. This reflects the mixed-use nature projected for the area, serving both residents and workers. The forecasts indicate half of residents in the area are forecast to walk to the station in the morning. Over 20 per cent of customers are forecast to arrive via point-to-point services while 16 per cent are forecast to arrive by private car and utilise park and ride facilities".

The current planning controls under Penrith LEP, and therefore the forecast densities and population, are very different to the planning controls proposed in the Western Sydney – Draft Aerotropolis Precinct Plan for Northern Gateway. We believe the preliminary station demand forecasts are too low and need to be reviewed to cater for higher capacity or be flexible to allow for higher capacity.

Action No 10 – We request clarification on what land use forecasts have been used to inform these demand forecasts. The paper does not provide this information. We believe these forecasts are too low and we would urge that the station, interchange and surrounding road network design allow for higher demand to ensure future capacity enhancements are not precluded. The forecasts also highlight the importance of pedestrian access and continued collaboration between Sydney Metro and Celestino to ensure high quality precinct integration and that main traffic collector roads are not immediately adjacent to the Sydney Metro precinct.

G. Interchange access considerations

Figure 7-23 in Chapter 7 of the EIS ("Luddenham Road Station – indicative layout and key design elements") proposes a station entry and new plaza on the northern side of the above ground station platforms. The New Precinct Street (North) – which has a full movement intersection with Luddenham Road seems to be the main vehicular route in and out of the SSP. This would place the 'pedestrian focused station entry and plaza' immediately adjacent to the main vehicular route for the wider precinct.

Action No 11 – High vehicle routes directly adjacent the station plaza/entry should be minimised. Metro should work with Celestino to ensure the plaza and entry is adequately located away from high rates of passing traffic and integrates with the wider masterplan for improved amenity and connectivity.

H. Commuter Carpark

a. Technical Paper 1 provides detail of 200 at-grade commuter parking spaces and a bus layover area south of the station (section 5.1.2). The paper also states that commuter parking may be expanded to provide a multi-storey facility should demand warrant it.

b. The operational traffic modelling assessment does not clarify whether movements to/from the bus layover have been incorporated into the assessment. Additionally, the assessment does not appear to account for the possibility of a multi-storey parking facility in 2036 and how this could impact road network performance. Given these two factors, the reported intersection performance results of Level of Service (LOS) A for station access roads intersecting with Luddenham Road would seem to be best case scenario (section 5.4.2) and is based on overly conservative assumptions.

c. It is noted that while commuter parking facilities can provide benefits for commuters, there are also a number of issues that need careful consideration in selecting and providing new commuter car parking and bus layover within SSP. These issues include:

   i. The proposed commuter car park location is located in close proximity (within 200m) to the Sydney Metro station. Sydney Metro should ensure the best possible outcome of uses surrounding and complementing the commuter car park.

   ii. The traffic generated by the commuter parking facilities (and possible future expansion) and bus layover circulation can cause congestion on the local SSP road network and a decrease in local and town centre amenity.

   iii. Sydney Metro customers who drive to the new proposed Sydney Metro station could perhaps otherwise be served by an efficient network of local buses, the viability of which is reduced by the commuter utilising free facilities.

d. Celestino has developed planning principles to cover the different locations in SSP where commuter car parking and bus layover planning is likely to be required:

   i. Commuter parking at least 400m from the metro station away from the high amenity pedestrian area. The commuter carpark location should have direct road access to Luddenham Road that will minimise impacts on surrounding land uses and local transport networks. This will also reduce the volume of vehicular trips into the Metro station area.

   ii. Given the long-stay nature of commuter parking, and where there is competition between commuter and commercial parking, it is appropriate that people using these facilities walk up to 400 m or 800m (five to ten minute walk) to access them. User perceptions of safety, security and amenity should be considered in the design of the facility and access to the facility.

iii. Bus layover location at least 400m (within 2 minutes travel time) from the metro station and external to the transport interchange precinct, in close proximity to Luddenham Road to reduce dead running costs for buses. There is no need for this facility to be located adjacent to the Metro station.

Action No 12 – Sydney Metro to further consider the location and ultimate function of the commuter carpark and bus layover and take into consideration further planning principles outlined above.

We would like to thank Sydney Metro for the opportunity to comment on the EIS. We look forward to receiving a response to the actions outlined in the letter above.

Please contact me on 0435 966 395 or matthew.scard@celestino.net.au if you would like to discuss the above.

Yours sincerely

Matthew Scard
Chief Operating Officer