

14 May 2024

Enquiries: Bayzid Khan  
Project No: 300303749Mecone  
Level 15, 6 Hassall Street  
PARRAMATTA NSW 2150**Attention: Erin Crane (Senior Planner)**

Dear Erin

**RE: North Rocks Village Planning Proposal (No's 361-365 North Rocks Road)  
Addendum Letter - Integrated Traffic & Transport Assessment**

## 1. Introduction

This letter is to accompany our Traffic and Transport Assessment dated 3rd May 2021, which was submitted in support of the Planning Proposal (PP-2021-3409) to rezone No's. 361-365 North Rocks Road, North Rocks from R2 Low Density to part R3 Medium Density and part R4 High Density Residential.

The Planning Proposal sought to create North Rocks Village; a Housing Diversity Precinct (HDP) as expressed in Council's Local Strategic Planning Statement (LSPS) to deliver a genuine mix of housing opportunities within a garden village setting that complemented existing neighbourhood character.

As part of the Planning Proposal, an Integrated Traffic and Transport Assessment report was prepared (by Stantec dated 3rd May 2021) to assess the adequacy of existing public transport arrangements and impacts of the proposal on surrounding road network. It should also be noted that Jacobs, a traffic and transport consultants, conducted an extensive peer review of the methodology, assessment, and findings by Stantec in March 2021 also November 2022, and concluded in favour of the report and its conclusions.

In conducting a rezoning review of the proposal, the Strategic Planning Panel of the Sydney Central Planning Panel (Panel) on 22nd March 2024 determined to adopt the masterplan (referred to as Option 1) including the following key elements:

- An FSR of 1.1:1
- Building heights ranging from 2 to 6 storeys
- Approximately 925 dwellings comprising a diversity of dwelling typologies, including seniors housing,
- 34% of the site as publicly accessible open space,
- Community floorspace: 4,400m<sup>2</sup>
- Non-residential and commercial floorspace: 2,800m<sup>2</sup>

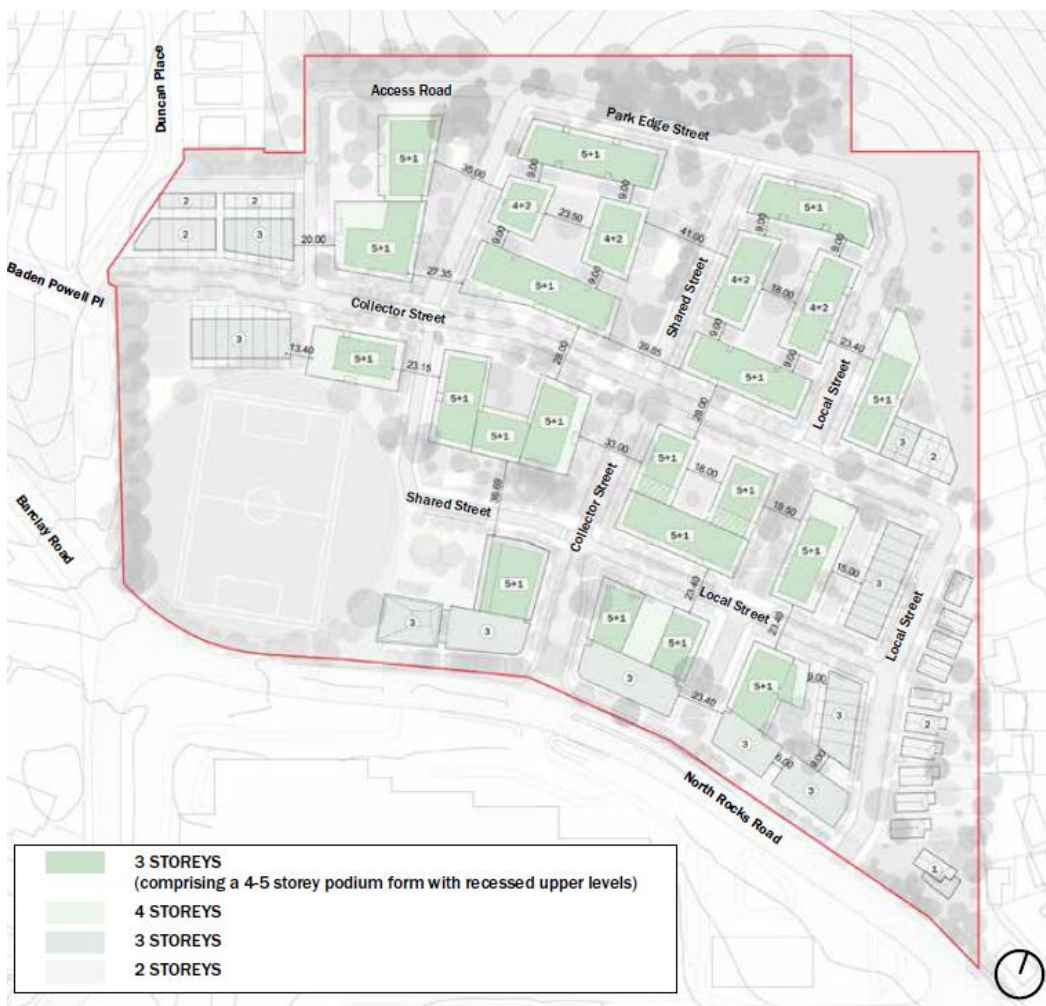
Stantec has been engaged by Mecone to undertake an updated traffic and transport assessment based on the most recent Panel endorsed masterplan. In particular, a comparative assessment of the updated and previous development yields, including changes in trip generation and parking requirements from the previous assessment has been undertaken and summarised in the following sections, in addition to transport arrangements and accessibility. This assessment has relied on the same methodology adopted in the previous assessment for trip generation and parking provision and should therefore be read in conjunction with the previous Integrated Traffic and Transport Assessment report (by Stantec dated 3rd May 2021).

## 2. Updated Masterplan and Development Yields

The following Figure 1 shows the updated masterplan for the site. It is understood no changes have been made to the proposed internal road network and site access arrangements in the previous masterplan and that it fundamentally remains the same.

The masterplan has been updated to reflect the above Panel imposed modifications, including amendment of building heights ranging from two to six storeys, an overall FSR of 1.1:1, refined building footprints as well as minor amendments to the development yield.

Figure 1 Updated masterplan of the proposed development



As mentioned above, the updated masterplan (2024) has resulted in some minor changes to the proposed development yields as summarised in Table 1. Table 1 also includes the proposed development yields based on the prior masterplan (2021).

It is noted the proposed land uses and development yields are indicative at this planning proposal stage and will be finalised at a later Development Application stage.

Table 1 Proposed development yields based on updated and previous masterplan

Use	Development yields based on updated masterplan (2024)	Development yields based on previous masterplan (2021)
Residential	795 dwellings (560 apartments, 185 underbuilding townhouses, 40 townhouses, 10 detached houses)	935 dwellings (690 apartments and 245 townhouses, terraces, and free-standing houses)
Seniors Living (Independent Living Units)	130 units	145 units
Aged Care Facility	100 beds	60-80 beds
Community space and library	4,400 sqm	2,700 sqm
Retail/ commercial (non-residential)	2,800 sqm	700 sqm
Publicly accessible open space	34% of site (approximate)	30% of the site (approximate)

As shown above, a reduction of overall residential dwellings is proposed in the updated masterplan. The number independent living unit is also reduced; however a minor increase is envisaged for the aged care centre from 60-80 to approximately 100 beds.

The updated masterplan also proposes to increase the gross floor area (GFA) for community space, library non-residential (commercial) uses as well as the proportion of open spaces as shown in Table 1.

The proposed indicative breakdown of residential dwellings based on number of bedrooms in the updated masterplan (2024) is shown in Table 2.

*Table 2 Proposed breakdown of residential dwellings based on the updated masterplan (2024)*

Proposed residential type	Percentage (approx.)	Dwelling units
<b>Residential apartments (total)</b>		<b>560</b>
1-bedroom	20%	112
2-bedrooms	60%	336
3-bedrooms	15%	84
4-bedrooms	5%	28
<b>Underbuilding townhouses (total)</b>		<b>185</b>
3-bedrooms	50%	93
4-bedrooms	50%	93
<b>Townhouses (total)</b>		<b>40</b>
3-bedrooms	50%	20
4-bedrooms	50%	20
<b>Detached houses (total)</b>		<b>10</b>
3-bedrooms	50%	5
4-bedrooms	50%	5
<b>Independent Living Units (Total)</b>		<b>130</b>
Number of bedrooms – to be confirmed at later stage	100%	130

### 3. Impact Assessment

The following sections summarise the anticipated impacts of the updated masterplan and development yields on the surrounding road network and transport infrastructure.

#### 3.1 Trip generation

The detailed methodology of trip generation estimation, including trip generation rates and assumed mode share for proposed various land uses based on previous masterplan (May 2021) has been discussed in the Integrated Traffic and Transport Assessment report (by Stantec, dated 3<sup>rd</sup> May 2021) and is also adopted to estimate the trips generated from the updated masterplan (April 2024).

The person-trip rates and rates for other modes for the seniors living, aged care and retail components were deduced from the adopted vehicle-trip generation rates after applying the expected mode shares.

In summary, the projected generation of trips are based on the following:

- Residential component:
  - Person-trip generation rates for high density residential sourced from the TfNSW TDT 2013/04a, having consideration of the scale of development sites and its location.
  - Specific future mode share assumptions to determine vehicle-trip generation rates.
- Seniors living, aged care and retail/ commercial components:
  - Vehicle-trip generation rates sourced from TfNSW *Guide to Traffic Generating Developments* 2002 or TDT 2013/04a.
  - Specific future mode share assumptions to determine person-trip generation rates.

It is acknowledged that the peaks for the different uses do not always coincide with each other or with the road network peaks. Some consideration has been given to this, through discount factors. In addition, it has been assumed that the proposed full-size sports oval will generate trips outside of the road network peaks, and therefore not included in this assessment. This is on the basis that junior grade sports training typically occurs after school and over the weekend, whereas adult grade training occurs after 7pm (based on Stantec's analysis of similar facilities), with opportunity to limit bookings that commence or conclude in the peak hour. Likewise, it has been assumed that the community hub and library will not typically generate external trips during the road network peaks and is therefore also not included in this assessment.

Based on above, following Table 3 summarises the trip generation for the various proposed development based on updated (2024) and previous (2021) masterplans (as shown in Table 1) in the AM and PM peak hours.

*Table 3 Trip generation summary based on updated (2024) and previous (2021) masterplans*

Mode	Generated trips (updated masterplan –2024)		Generated trips (previous masterplan –2021)		Net change	
	AM peak	PM peak	AM peak	PM peak	AM	PM
<b>Person-trips</b>	718	697	768	730	-50	-33
<b>Vehicle-trips</b>	359	355	379	363	-20	-8
<b>Bus-trips</b>	147	145	161	155	-14	-10
<b>Train-trips</b>	34	35	39	40	-5	-5

The above table shows that the updated masterplan and revised development yields will result in a minor reduction of overall trips during the peak hours. The vehicular trips associated with the updated masterplan will be reduced by 2 - 5% during peak hours (20 vph and 8 vph in the AM and PM respectively). Though the proposal increases the GFA for retail/commercial, the proposed residential dwellings, being the major trip generator, has been reduced from 1,080 units (including 935 residential plus 145 Independent Living Units) to 925 units (including 795 residential plus 130 Independent Living Units), which resulted in a reduction of peak hour trips by the updated masterplan (2024) when compared with the trips generated by previous masterplan (2021).

### 3.2 Parking assessment

As outlined in the Integrated Traffic and Transport Assessment report (by Stantec, dated 3rd May 2024), the overall car parking requirements for the proposed development was calculated based on The Hills DCP 2012, Parramatta DCP 2011, and the Guide to Traffic Generating Developments (TfNSW, 2002). As noted in the prior traffic assessment report, The Hills DCP 2012 applied to the site, however, given recent Council amalgamations, parking requirements from Parramatta DCP are now applicable and have also been assessed. It is noted that the City of Parramatta has recently published an updated Parramatta DCP 2023, which came into effect on 18 September 2023 and provides a consolidated set of controls that repeals the previous Parramatta DCP 2011 and The Hills DCP 2012. As such, parking requirements based on these superseded DCP's are considered obsolete and not applicable for the proposed development, however parking requirements using Parramatta DCP 2011 is included in Table 4 below for consistency and comparison purposes. As shown in Table 4, a key change to the Parramatta DCP 2023 is the inclusion of a separate parking rate for 4-bedrooms dwellings, which is slightly higher than the parking rates included for 3-4 bedrooms dwellings in the Parramatta DCP 2011.

The Parramatta DCP 2023 has adopted revised parking rates and minimum parking requirements for various development types and is recommended to assess the parking requirements for the updated masterplan (2024).

The State Environmental Planning Policy – Housing for Seniors or People with a Disability, 2004 (SEPP Seniors) has been referenced for parking rates for the residential aged care facility.

Table 4 shows the overall parking requirements for the site based on previous (2021) and updated (2024) masterplans.

Table 4 Overall parking assessment based on the updated (2024) and previous (2021) masterplans

Description	Use	Parramatta DCP 2023 minimum parking requirement (outside 400 m of transit)	Parramatta DCP 2011 (outside 400 m of transit)	TfNSW [1] (medium density)
Residential Apartment Building/ Townhouse/ Terraces and Small Lots (parking spaces per dwelling)	1 bedroom	1.0	1.0	1
	2 bedrooms [2]	1.25	1.25	1.2
	3 and above bedrooms	1.5	1.5	1.5
	4 bedrooms and above	2.0	1.5	1.5
	Visitors	0.25	0.25	0.2
Aged Care		Visitors – 1.0 per bed, Staff – 0.5 per staff, Ambulance – 1 space		
Community uses [3]		Empirical Assessment (1.0 per 100 m2)		
Retail/ commercial (parking space per 100 m2)		3.3	3.3	4.5
Oval [4]		Council Advice (50 to 80 spaces)		
<b>Required parking spaces for previous masterplan (2021)</b>		<b>1,787</b>	<b>1,757</b>	<b>1,674</b>
<b>Required parking spaces for updated masterplan (2024)</b>		<b>1,704</b>	<b>1,632</b>	<b>1,594</b>
<b>Net change</b>		<b>-83</b>	<b>-125</b>	<b>-80</b>

[1] Guide to Traffic Generating Developments (TfNSW, 2002).

[2] including independent living units assumed to have 2 bedrooms.

[3] based on the community facility being ancillary to the broader development.

[4] based on feedback received from City of Parramatta to Elton Consulting dated 27 May 2018.

Table 4 shows that the statutory parking requirements for the updated masterplan (2024) will decrease in general based on parking rates outlined in the Parramatta DCP 2023, Parramatta DCP 2011, and the Guide to Traffic Generating Developments (TfNSW, 2002). It is to be noted that the Parramatta DCP 2023 was not available when the parking requirements for the previous masterplan (2021) was assessed. However, for consistency and comparison purposes, the Parramatta DCP 2023 minimum parking rates are used to estimate the statutory parking requirements for the previous masterplan (2021) as summarised in Table 4.

In summary, the updated masterplan will result in -

- Decrease of 83 parking spaces with reference to Parramatta DCP 2023 (outside 400 m of transit)
- Decrease of 125 parking spaces with reference to Parramatta DCP 2011 (outside 400 m of transit)
- Decrease of 80 parking spaces with reference to TfNSW (medium density).

Considering the location of the site near schools and shops, its medium/ high density character and proposed improved availability of public transport services, the Parramatta DCP 2023 rates are most appropriate and is recommended. Reduced rates would also better respond to the mode share objectives for the site and the strategy of encouraging sustainable modes of transport.

Provisions for motorcycle parking, electric vehicle facilities, car share pods, loading and service vehicle areas, waste collection and emergency vehicle parking will all be considered as part of the future development application(s) for specific uses/ buildings across the site.

### 3.3 Active and public transport

The proposal aims to encourage cycling as a viable alternative to the private car use for journeys under five kilometres. Linkage to key local destinations and existing networks will be provided by the proposal, as well as bicycle parking and end-of-trip facilities.

The prior traffic assessment undertaken in 2021 (by Stantec, dated 3<sup>rd</sup> May 2021) deemed the public transport arrangements and accessibility levels to be satisfactory. Whilst the current public transport network can accommodate the increased patronage from a capacity perspective, several public transport improvements in terms of bus frequency,



travel time and bus stop facilities are proposed, to ensure greater attractiveness of public transport and to achieve a sustainable mode share for the site.

With a reduction in the dwelling yield and population, no impacts are envisaged, rather an improvement in transport capacity.

The previous assessment also concluded the previous masterplan (2021) encouraged cycling as a viable alternative to the private car use for journeys under five kilometres. Linkage to key local destinations and existing networks was proposed in the previous masterplan, as well as bicycle parking and end-of-trip facilities. With no change proposed to the previous active transport linkages, the updated masterplan (2024) is envisaged to have positive impacts on the surrounding active transport facilities.

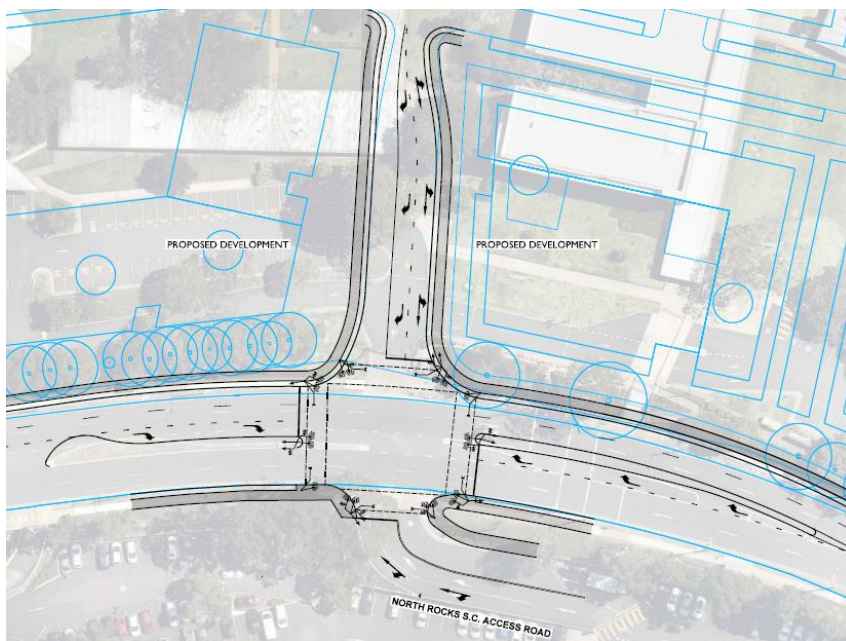
### 3.4 Site access and intersection performance

No change to the site access is proposed in the updated masterplan (2024). The updated masterplan retains all the following three site accesses:

- North Rocks Road/ North Rocks Shopping Centre (signalised main entry and exit)
- North Rocks Road/ secondary site egress (left out only from the site to North Rocks Road)
- Baden Powell Place/ secondary site entry (entry-only to the site via Baden Powell Place as an extension of the existing road).

The concept layout of the proposed signalised access at North Rocks Road/ North Rocks Shopping Centre is shown Figure 2. No change is proposed to the intersection geometry in the updated masterplan.

*Figure 2 North Rocks Road signalised access to the site*



Source: Nearmap (aerial photo) and Fender Katsalidis (indicative development footprint)

As discussed in Section 3.1, the updated masterplan and resulted decreased development yields will result in a reduction of overall trips in the AM and PM peak hours, mainly due to the reduction of number of dwelling units. As such, it can be assumed that the updated masterplan (2024) will reduce impacts upon the surrounding road network compared to the previous masterplan (2021) as outlined in the Integrated Traffic and Transport Assessment report (by Stantec, dated 3<sup>rd</sup> May 2024). As shown in Table 3, the updated masterplan (2024) will reduce the overall vehicular trips by two to five per cents in the peak hours (reduction of 20 vph and 8 vph in the AM and PM peak hours respectively) when compared with vehicular trips generated by the previous masterplan (2021). Accordingly, it is anticipated the revised masterplan will have no material impacts to the previous intersection modelling and results.

Therefore, the previous intersection modelling and results are considered valid and can be used to understand the impacts of the updated masterplan (2024) on the performance of surrounding key intersections and wider road network. No additional updates to the previous intersection model are undertaken as part of this traffic assessment.

## 4. Summary

Based on the analysis and discussions presented within this letter, the following conclusions are made:

- The updated Planning Proposal would facilitate a mixed-use development at 361-365 North Rocks Road, North Rocks, indicatively comprising 795 residential dwellings (mix of residential apartments and townhouses), 130 seniors independent living units, a small residential aged care facility and 7,200 square metres of ancillary floor area comprising commercial, non-residential and community facilities (library, distributed community pavilions).
- The updated masterplan (2024) decreases the overall number of residential dwellings from 1,080 (including 935 residential dwellings plus 145 Independent Living Units) to 925 (including 795 residential dwellings plus 130 Independent Living Units), with minor increases to the gross floor area of commercial/retail. With residential land-use as the main trip generator, the updated masterplan has resulted in an overall reduction of trips in the AM and PM peak hours. The overall trip reduction due to the updated masterplan actually represents a 2 – 5% reduction of trips during peak hours (decrease by 20 vph and 8 vph in the AM and PM peak hours respectively).
- The City of Parramatta has recently published an updated Parramatta DCP 2023, which came into effect on 18 September 2023 and provides a consolidated set of controls that repeals the previous Parramatta DCP 2011 and The Hills DCP 2012. The Parramatta DCP 2023 has adopted revised parking rates and minimum parking requirements for various development types that are relevant to the updated masterplan (2024).
- The overall statutory parking requirements for the proposed development is also reduced when compared with the parking requirements by the previous masterplan (2021). The parking requirements for the proposed development is calculated based on the parking rates prescribed in Parramatta DCP 2023 and the Guide to Traffic Generating Developments (TfNSW, 2002).
- The proposed site access arrangements generally remain the same as per the 2021 masterplan. That is, all three site access points are retained, including the primary signalised entry and exit along the North Rocks Road frontage.
- The updated masterplan results in a reduction of vehicular trips during AM and PM peak hours which should result in minor improvements to the previous intersection performance results. However, considering the reduced traffic volume number (20 vph and 8 vph in the AM and PM peak hours), this will have no significant impact on the overall intersection delays or Level of Service. As such, the previous intersection modelling and results are considered valid to assess the impacts of the proposed updated masterplan. No updates to the previous intersection modelling are undertaken as part of this traffic assessment.
- Detailed traffic modelling confirms that traffic generated by the proposal alone will not have adverse impacts on the local road network near the site, nor on the broader arterial road network.
- The traffic generated by the proposal remains insignificant when compared to the forecast unconstrained background traffic growth occurring at a metropolitan scale. The prior 2021 assessment (by Stantec dated 3<sup>rd</sup> May 2021) concluded that whilst the proposal constituted approximately 10 per cent of future traffic at the intersection of North Rocks Road, Shopping Centre and Site Access Roads, this proportion would reduce further away from the site as traffic was dispersed across the network. Provided that the updated masterplan (2024) will result in a minor reduction of traffic (only 20 vph and 8 vph in the AM and PM peak hours) when compared with the previous masterplan (2021), this will result in a similar contribution of 10 per cent of future traffic at the intersection of North Rocks Road, Shopping Centre, and Site Access Roads.
- Whilst the current public transport network is deemed satisfactory and can accommodate the increased patronage from a capacity perspective, several public transport improvements in terms of bus frequency, travel time and bus stop facilities are proposed, to ensure greater attractiveness of public transport and to achieve a sustainable mode share for the site. Improved walking and cycling infrastructure are also proposed, with new links from the site to key local destinations, transport connections, and existing networks.

Based on the above, the updated masterplan (2024) is anticipated to have no adverse impacts on the surrounding road network and transport facilities when compared with the previous masterplan (2021) and can be supported from a traffic and transport perspective.

Overall, the site is in a good strategic location from a transport perspective, being adjacent to North Rocks Shopping Centre and within 30-minute commuting catchment of key employment areas such as Parramatta-Westmead, Norwest/Bella Vista, and Macquarie Park. It leverages existing schools and open space assets, provides community benefits such as a new sports oval and community facilities, as well as proposes a suite of improvements to existing transport infrastructure and services near the site to increase active and public transport trips and reduce the reliance on private vehicle trips. Finally, it provides a range of residential typologies that will bring a more diverse demographics to North Rocks. These demographics have been shown elsewhere to have lower reliance on private vehicle travel than the existing predominant low density residential dwellings.

On the basis of the above, the proposal has appropriate strategic and site-specific merit from a traffic and transport perspective and can be supported.

I trust this is satisfactory; should you have any questions, please do not hesitate to contact me directly.

Yours sincerely

**Stantec Australia Pty Ltd**



**Bayzid Khan**  
**Principal Transport Engineer**

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