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# **DECISION NOTICE**

# Making of a Ministerial Infrastructure Designation (MID) for the Queensland Academy for Science, Mathematics and Technology, Toowong

Decision details	
Decision:	Designation made under section 38 of the Planning Act 2016
Date of decision:	15 November 2018
Type of infrastructure:	<ul><li>Planning Regulation 2017, Schedule 5, Part 2:</li><li>Item 6: Educational facilities.</li></ul>
Description of infrastructure:	Designation of the site for the existing school and to facilitate the construction of three new buildings ranging in height from two to three storeys, demolition, refurbishment of existing buildings, temporary classrooms, additional formalised carparking, improved vehicle and pedestrian access, and other works in accordance with the designation.
DSDMIP reference:	MID-0818-0297
Premises details	
Street address:	78 Bywong Street, TOOWONG QLD 4066
Real property description:	Lot 102 on CP852773
Local government area:	Brisbane City Council
Infrastructure entity details	
Infrastructure entity:	Department of Education
Infrastructure entity contact details:	c/- Department of Housing and Public Works Building and Assets Services PO Box 2937 BRISBANE QLD 4001
Requirements	

A notice of requirements included in the designation is at **Schedule 1**.

## Submissions

A notice of how I dealt with the submissions is at Schedule 2.

#### Advice to the entity

Despite the designation, the entity is responsible for determining what obligations exist under previous development approvals that apply to the premises.

#### **Effective date**

As set out in section 9(3) of the *Planning Act 2016*, the designation will take effect from the date the gazette notice for this designation is published in the Queensland Government Gazette.

#### **Duration of designation**

The duration of the designation is set out in section 39 of the Planning Act 2016.

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CAMERON DICK MP Minister for State Development, Manufacturing, Infrastructure and Planning

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## Schedule 1 - Notice of requirements included in the designation

Development under the designation is to be carried out generally in accordance with the plans, reports, documents and requirements included in Table 1.

Table 1 – Requirements					
Plan of de	esignation				
1.	<ul> <li>a) The 'Plan of designation for Queensland Academy for Science, Mathematics and Technology' prepared by the Department of State Development, Manufacturing, Infrastructure and Planning, MID-0818-0297, dated 08/11/2018 and included at Annexure 1.</li> </ul>				
Servicing					
2.	<ul> <li>Prior to works commencing, confirm the adequacy, capability and location of the existing infrastructure (water, sewer, electricity and telecommunications) to service the proposed development.</li> </ul>				
	<ul> <li>b) If reasonably required, the infrastructure should be upgraded to cater for the proposed development.</li> </ul>				
	c) Connect the development to all relevant urban infrastructure.				
Stormwat	er management				
3.	<ul> <li>a) Implement the stormwater quantity and quality measures identified in the following sections of the Site Based Stormwater Management Plan, ref. 17473D, dated August 2018, prepared by Bornhorst + Ward Pty Ltd, as included at Annexure 2:</li> </ul>				
	i. Section 3.2 – Proposed Stormwater Drainage				
	ii. Section 4.1.3 – Detention System				
	<ul> <li>iii. Section 5.2.5 – Water Surface Levels and Development Requirements</li> </ul>				
	iv. Section 6.2.5 – Treatment Methodology				
	v. Section 6.2.6 – Treatment Nodes				
	vi. Section 6.2.7 – Proposed Treatment Train				
	vii. North Building Drainage Layout – SK-C0004				
	viii. Stem Building Drainage Layout – SK-C0005.				
Flora and	l fauna				
4.	a) Prior to works commencing, submit a Vegetation and Fauna Management Plan (VFMP) prepared by a suitably qualified ecologist, to the Department of State Development, Manufacturing, Infrastructure and Planning (infrastructuredesignation@dsdmip.qld.gov.au). The VFMP must include details of all measures to identify, minimise and mitigate impacts to vegetation, fauna resources and habitats prior to clearing, including at a minimum:				

	i.	the flora and fauna mitigation measures identified within Section 4 – Recommended Mitigation Measures of the Ecological Assessment, ref. 0303-013, version 3, dated 02/08/18, prepared by BAAM Ecological Consultants and included at <b>Annexure 3</b>
	ii.	preclearing inspections (for fauna, hollows and nests) to be conducted by a suitably qualified ecologist
	iii.	staging and sequence of clearing and recovery procedures
	iv.	presence of a qualified wildlife officer or suitably qualified ecologist during clearing operations
	٧.	measures to protect and recover fauna during clearing operations
	vi.	measures to replace/relocate habitat and resources that will be lost, including nesting boxes in appropriate locations
	vii.	site inspection to confirm the presence of any invasive/pest plant or animal species and removal in accordance with legislative requirements
	viii.	on-site replacement planting for native trees and shrubs cleared for the proposed development, provided at a rate of 1:1 and to be located outside of the Toowong Creek corridor
	ix.	a management and maintenance strategy for a period of five years to ensure the success of replacement planting, with a commitment for any failed replacement planting to be rectified and/or replaced
	x.	investigate opportunities to utilise timber from the large ironbark tree to be removed for the new northern general learning area building, for on-site landscaping, furnishings, creek improvements, etc
	xi.	operational and design measures to minimise potential environmental impacts to Toowong Creek through day-to-day operations of the school, including:
		<ul> <li>external lighting must meet the relevant Australian Standards and be directed away from Toowong Creek wherever possible</li> </ul>
		<ul> <li>the proposed new northern general learning area building must include screening to creek facing facades to further obscure lighting to Toowong Creek.</li> </ul>
b)	If hollo to be a breedi places endan coloni be pre (wildlif Manuf (infras breedi	ows, nests or other potential breeding places are identified, these are assessed by a suitably qualified person to determine if they are ing places. For any proposed activity that will impact on breeding s of protected animals that are classified as extinct in the wild, agered, vulnerable, near threatened (EVNT), special least concern, al breeder or least concern, a Species Management Plan (SMP) must epared and submitted to the Department of Environment and Science ie@des.qld.gov.au) and to the Department of State Development, facturing, Infrastructure and Planning structuredesignation@dsdmip.qld.gov.au), prior to impacting on the ing place.
c)	Protec impac <i>Devel</i>	ct vegetation that is not required to be cleared from construction ts in accordance with the AS4970-2009 Protection of Trees on opment Sites.

	d)	If Endangered, Vulnerable or Near Threatened plants are identified prior to clearing of any vegetation, obtain a protected plant clearing permit in accordance with the <i>Nature Conservation Act 1992</i> .
	e)	Development (excluding stormwater related works) must not encroach into the Toowong Creek corridor beyond the line of existing improvements on the site and in accordance with the built form envelopes shown on the 'Plan of designation for Queensland Academy for Science, Mathematics and Technology' prepared by the Department of State Development, Manufacturing, Infrastructure and Planning, MID-0818-0297, dated 08/11/2018 and included at <b>Annexure 1</b> .
Rehabilita	atior	n and revegetation plan
5.	a)	Prepare a Rehabilitation and Revegetation Plan (RRP) that demonstrates a strategy to enhance the environmental values and functions of the adjacent Toowong Creek from Bywong Street through to Miskin Street.
	b)	The RRP must be prepared by a suitably qualified ecologist and submitted to the Department of State Development, Manufacturing, Infrastructure and Planning (infrastructuredesignation@dsdmip.qld.gov.au) prior to commencing clearing and works associated with the new northern general learning area building and eastern building (excluding temporary buildings).
	c)	Implement the measures and recommendations identified within the RRP applicable to the site (within the school's boundaries), delivered in conjunction with the new northern general learning area building and eastern building.
	d)	Consult with Brisbane City Council to investigate opportunities to implement the RRP measures and recommendations outside of the school boundaries.
Construct	tion	management
6.	a)	Prior to works commencing, submit a Construction Environmental Management Plan (CEMP) to the Department of State Development, Manufacturing, Infrastructure and Planning (infrastructuredesignation@dsdmip.qld.gov.au). The CEMP must include/address:
		<ul> <li>an Erosion and Sediment Control Plan that addresses the erosion risks and surface water run-off</li> </ul>
		<ul> <li>dust mitigation methods (such as use of water to supress potential dust) and air quality management procedures</li> </ul>
		iii. construction noise and vibration, including the default noise standards in accordance with the <i>Environmental Protection Act 1994</i>
		iv. hours of construction, including:
		<ul> <li>construction activities to be restricted to Monday to Saturday (excluding public holidays) between 6.30am and 6.30pm</li> <li>operation of regulated devices such as chainsaws, mulchers and electrical, mechanical or pneumatic power tools is restricted to Monday to Saturday (excluding public holidays) between 7 am and 7 pm and</li> <li>no work is undertaken on public holidays</li> </ul>

		v. w m	aste control and management, in conjunction with a waste nanagement plan if deemed necessary				
		vi. p p fu	roximity of works to Toowong Creek and measures to mitigate otential impacts on ecological and environmental values and inctions, including stormwater quality				
		vii. d w d	isposal and management of hazardous materials and regulated aste, including removal by a suitably licenced contractor where eemed necessary				
		viii. a	ccess locations for and management of construction vehicle traffic				
		ix. p d	roximity of works to easements and services and any necessary esign measures, additional analysis or safe work methods				
		x. o h	ther required permits from Brisbane City Council, easement olders or utility providers				
		xi. a re th la	Koala Conservation Management Strategy, to be considered in all elevant phases of the project and provided to personnel involved in he project including project managers, principal design consultants, andscape architects and contractors.				
Acid sulfa	ate so	oils					
7.	a) If potential or actual ASS is identified during construction, an ASS investigation is to be carried out and managed in accordance with an ASS management plan.						
Geotechn	ical						
8.	a) /	As part o confirms	f detailed design, undertake a geotechnical investigation that the ground conditions and informs building requirements.				
Car parki	ng an	d acces	s				
9.	a) I	Provide o	on-site car parking as follows:				
		i. 7	3 carparks within the proposed carpark accessed via Miskin Street				
		ii. 4 u	4 carparks (including 1 PWD carpark) adjacent to, and within the ndercroft of, the proposed northern GLA building				
		iii. 1	PWD carpark adjacent to the temporary classrooms				
		iv. 1 a	9 carparks (including 1 PWD carpark) within existing carparking reas adjacent to Bywong Street.				
	b) ( 1 1 1 1	Consult v he off-si and 'Ped Conclusi _ocations revision I at <b>Anne</b>	with Brisbane City Council to investigate opportunities to implement te (on-street) measures in relation to 'On Street Set-down/Pick-up' estrian Crossing' as identified within Section 6 – Summary and on, and Figure 2-13 – On-street and Off Street Car Park s, of the Traffic Assessment, ref. B17483TR001_FINALStage1-3, E, dated 03/08/18, prepared by Lambert And Rehbein and included <b>ture 4</b> .				
	c)	Provide a access s Science, State De	appropriate signage and gates at the Dampier Street vehicular hown on the 'Plan of designation for Queensland Academy for Mathematics and Technology' prepared by the Department of velopment, Manufacturing, Infrastructure and Planning,				

	MID-0818-0297, dated 08/11/2018 and included at <b>Annexure 1</b> , to limit vehicular access to occasional use only and not for day to day school operations, for example, staff carparking.						
Active tra	Active transport						
10.	a) Provide on-site bicycle parking at a rate of 1 space per 5 students, in accordance with the future growth and development of the school.						
Temporar	Temporary buildings						
11.	a) Following the completion of the proposed refurbishments, new northern general learning area building and eastern building, remove temporary buildings from the site and return the 'Temporary built form envelope' shown on the 'Plan of designation for Queensland Academy for Science, Mathematics and Technology' prepared by the Department of State Development, Manufacturing, Infrastructure and Planning, MID-0818-0297, dated 08/11/2018 and included at <b>Annexure 1</b> , to use as sports courts.						

Annexure 1 to Schedule 1 – Plan of designation



Plan of designation for Queensland Academy for Science, Mathematics and Technology Title: 78 Bywong Street, Toowong, QLD, 4066 Address: MID-0818-0297 **Reference:** 08/11/2018 Date:

Department of State Development, Manufacturing, Infrastructure and Planning

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Annexure 2 to Schedule 1 – Stormwater management measures

## 3. EXISTING AND PROPOSED STORMWATER INFRASTRUCTURE

#### 3.1 EXISTING INFRASTRUCTURE

A Dial Before You Dig Investigation and survey of the site have been completed. The following stormwater infrastructure was noted:

- Brisbane City Council Plans suggest that an 825mm pipe from Bywong Street and a 600mm dia pipe collecting storm water from the external catchment discharge by a headwall located in the south-western corner of the site. This runoff flows to the south eastern corner of the site towards the waterway corridor;
- Stormwater infrastructure is located within the subject site and runs west to east along the center of the site in the form of a 900mm pipe. Runoff collected from this infrastructure is discharged to the waterway corridor on the south-eastern corner. This waterway corridor runs under Miskin Street, through a 1650mm culvert;
- Other stormwater infrastructure immediately surrounding the site include pipes of various sizes discharging into the waterway corridor north of the site;
- There is currently existing stormwater infrastructure located within the northern carpark. An investigation during design will be completed to confirm if the infrastructure has capacity for the increase in runoff or if upgrades are required;
- During a site visit, a Gross Pollutant Trap (Everhard, CDS Unit) was located adjacent to the proposed northern building and is currently treating a portion of the existing buildings;
- Internal stormwater infrastructure is also located within the adjacent road, south east of the proposed STEM Building.

Council Asset Plans and survey of the existing stormwater infrastructure can be found in Appendix C of this report.

#### 3.2 PROPOSED STORMWATER DRAINAGE

The following points outline the proposed stormwater infrastructure for the development site:

- Minor storm events as well as roof water will be collected by the internal stormwater piped network;
- Existing stormwater infrastructure located in the vicinity of the northern building is required to be redirected around the proposed building. This includes the gross pollutant trap which will require to be relocated to the northern carpark. Refer to drawing SK-C0004 in Appendix B for further information.
- It is anticipated that the underground pipe infrastructure does not have capacity to accommodate the additional runoff, therefore downstream pipe infrastructure for both buildings will require to be upgraded. A preliminary drawing indicating required upgrades to the pipe infrastructure can be seen in SK-C0004 and SK-C0005 in Appendix B. Upgrades will be confirmed during detailed design;
- Major events will be directed as surface flow through the site and ultimately discharge to the water way corridor running through the site;
- As there will be an increase in impervious areas as a result of the development of the STEM building, stormwater quantity measures will be required to maintain existing discharge rates experienced on the site. It is proposed that stormwater quantity will not be required for the northern building as stormwater currently flows directly to the waterway, therefore it is desirable to discharge these flows as quick as possible to avoid coinciding peaks through the water way corridor. Refer to Section 4 for further details of stormwater quantity;

 As the total development works area is greater than 2500m<sup>2</sup> stormwater quality treatment measures will be required for the site. Further details of stormwater quality can be found in Section 6 of this report.

#### 4. STORMWATER QUANTITY ANALYSIS

Under the Brisbane City Council Guidelines, several design elements were identified in relation to stormwater management issues. Brisbane City Council must be satisfied that:

- The proposed development can be drained;
- The stormwater management system can follow the features and functions of the natural drainage system;
- The volume, timing, velocity and pollutant load of stormwater has no adverse effect on any surrounding properties or receiving waters; and
- Suitable provision is made in the design layout to accommodate for major drainage.

All stormwater discharge will comply with Brisbane City Council's Stormwater Management Code with quantity calculations completed in accordance with the requirements and methods outlined in the Queensland Urban Drainage Manual (QUDM 2013).

#### 4.1 PEAK FLOW CALCULATIONS

Modelling of stormwater runoff quantity has been considered for the existing site conditions and operational phase of the development. The Rational Method as outlined in QUDM was used to determine the peak flow rate corresponding to the minor and major storm events for this development.

Brisbane City Council Subdivision and Development Guidelines, Table B2.1, "Design Standards for Major/Minor Drainage Systems" was used to identify the design storm events for this development as:

Minor (piped flow) -	10% AEP (1 in 10 year ARI)
Major (overland flow) -	1% AEP (1 in 100 year ARI)

Flow rates for the developed site have been evaluated as a totals discharge for the two building sites.

#### 4.1.1 Rainfall Data

The IFD data used in the Rational Method calculations was obtained from the Australian Bureau of Meteorology website based on the approximate latitude and longitude of the development site (LAT: 32.258°S, LONG: 150.665°E). This data indicated the 60 minute, 10 year ARI rainfall intensity applicable to the development site is 71mm/hr. This rainfall intensity was used in conjunction with the fraction impervious values to determine the coefficients of runoff for the existing and developed phases of the development in accordance with QUDM.

#### 4.1.2 Peak Flow Discharge – STEM Building

The coefficient of runoff was taken to be 0.70 and 0.90 for the existing and proposed scenarios respectively, this was determined from existing and proposed impervious areas.

The time of concentration for both cases was determined in accordance with QUDM. The existing time of concentration was calculated at 6.3 minutes based on 29m of overland sheet flow over a grassland type surface with a 20% gradient. This existing time of concentration was evaluated from the southwest of the building catchment to the northeast. The developed time of concentration was adopted as 5 minutes based on the standard time for roof drainage in accordance with Table 4.6.3 of QUDM.

The following table is a summary of the peak site stormwater discharges for varying storm events, calculated in accordance with the Rational Method as outlined in the Queensland Urban Drainage Manual, to the waterway corridor running through the site for the existing and developed conditions. Detailed calculations are attached in Appendix D for reference and review.

	Parameter	Existing	Developed	Difference
	Area (ha)	0.263	0.263	0.00
ails	Fraction Impervious (fi)	10%	100%	+90%
it Det	Coefficient of Runoff (C10)	0.70	0.90	+0.2
hmen	Time of Concentration (min)	6.3	5.0	-1.3
Catch	10 year Rainfall Intensity (mm/hr)	202	215	+13
	20 year Rainfall Intensity (mm/hr)	234	248	+15
	50 year Rainfall Intensity (mm/hr)	275	292	+17
	100 year Rainfall Intensity (mm/hr)	308	327	+19
	10% AEP (m³/s)	0.103	0.141	+0.038
arge	5% AEP (m³/s)	0.125	0.171	+0.046
Disch	2% AEP (m³/s)	0.162	0.213	+0.051
	1% AEP (m³/s)	0.189	0.238	+0.049

#### Table 1: Pre and Post Development Peak Stormwater Discharge to the Brisbane River.

As indicated in the table above, the peak discharge from the southern building development to the waterway corridor will increase in the developed scenario. To ensure that there will be no impact on the downstream infrastructure or properties as a result of the development the flow increase is to be mitigated by constructing a detention system. The detention system proposed is a below ground storage tank.

Refer to Appendix D for the rational method calculations of the STEM Building.

#### 4.1.3 Detention System

As discussed in the previous section, peak discharges from the STEM building zone will increase as a result of the proposed development. In order to mitigate these flows a detention system is proposed. An initial detention sizing has been completed and the volume required will be approximately 26m<sup>3</sup>. As previously mentioned, it is proposed to provide this volume in a below ground storage tank.

#### 5.2.3 **Model File Description**

Project Name: QASMAR\_OVERLAND FLOW Plan File Data: Existing Condition Geometry File Data: Geometry 1 Steady Flow File Name: Flow 1

#### 5.2.4 **HEC-RAS Modelling Outputs**

The outputs from the HEC-RAS model for existing conditions can be seen in the table below.

	Table 4: HEC-RAS Mo	odel Outputs	
CHAINAGE	MINIMUM CHAINAGE	WATER SUFACE	E.G ELEVATION
	ELEVATION	ELEVATION	
10	17.26	17.57	17.47
20	17.34	17.51	17.57
30	17.43	17.59	17.67
40	17.54	17.65	17.77
50	18.23	18.41	18.45
60	18.33	18.50	18.45
70	18.41	18.58	18.63
80	18.49	18.73	18.73

. . . . . .

Refer to the HEC-RAS Output file and water surface within Appendix E for further information. The HEC-RAS model can be provided upon request.

#### 5.2.5 Water Surface Levels and Development Requirements

Table 4 indicates that the maximum water surface level of the overland flow path is located at the upstream end of the tennis courts. The water surface level during a Q500 event is RL 18.73m AHD, approximately 0.2m above the existing ground level. We understand that the demountable buildings will be elevated to have a floor level of 20.85m AHD. It is our understanding that the area below the floor level will be clear of obstructions. Therefore the ground floor will not be affected by overland flows. The height of the access ramp from the demountable buildings should not be less than 19.03m AHD as a 300mm freeboard should be applied to the maximum water surface level.

#### 6.2.2 Modelling/Assessment Approach

A quantitative assessment of stormwater runoff quality was considered for the catchments ultimate developed scenario.

The predicted reductions in mean annual loads of key pollutants have been identified using the "Model for Urban Stormwater Improvement Conceptualisation" (MUSIC), Version 6 (6.3.0). MUSIC is a stormwater quality modelling program that provides estimates of stormwater pollution generation and the performance of stormwater management measures used in series or parallel to form a 'treatment train'.

#### 6.2.3 Meteorological Data

The first step in creating the MUSIC model was to select the appropriate meteorological data set (period and time step) to be used as the basis for the runoff algorithms. Section 3.1 – Meteorological Data and Section 3.2 – Modelling Period and time-step, of the MUSC Modelling Guidelines details the Rainfall Data and Time Step process requirements of the model, respectively.

The time step used for the MUSIC modelling process was: Brisbane 6 Minutes.

#### 6.2.4 Source Nodes

The second step taken in creating the MUSIC model was to define 'Source Nodes' or Sub-Catchments. Source nodes for modelling these catchments were based on the Water by Design reference material: Music Modelling Guidelines. The MUSIC model uses the split catchment approach and consists of source node catchment areas as outlined below:

Node type	Catchment	Area (ha)	Fraction Impervious				
Roof (STEM Building)	C1	0.208	100%				
Ground (STEM Building)	C1	0.055	60%				
Roof (North Building)	C2	0.070	100%				
Ground (North Building)	C2	0.012	50%				

#### **Table 6: Source Node Information**

The exposed area of road is currently existing therefore was not included as area for the new development. The catchment extents are illustrated in SK-C0003 and input parameters both attached in Appendix B.

### 6.2.5 Treatment Methodology

It has been determined that the existing CDS Unit will need to be demolished as it will be impacted by the northern building. A new gross pollutant trap will be located within the carpark as shown on drawing SK-C0004. The new gross pollutant trap will be sized to cater for the whole catchment draining to the north.

As mentioned in section 5.2.4 the exposed carpark area relating to the northern building is currently existing and has not been included in the model as part of the new development. As best engineering practices it is proposed that the stormwater pits within the carpark will be retrofitted with Stormsacks to collect gross pollutants from the road way.

The northern building is proposed to be treated through a treatment tank containing a single SPEL Filter. The site requires at least 3 Stormsack for roof and ground areas. This system will be located in the car park area and connect into the new

upgraded infrastructure. As best engineering practices a Stormsack should be placed in all new pits. See drawings SK-C0004 in Appendix B for more information.

Stormwater discharge from the STEM building catchment is proposed to be contained through a combined stormwater detention and treatment tank containing 4 SPEL Filters. A minimum of 3 Stormsacks will be required to pre-treat the roof and ground areas from the STEM building however best engineering practices is to install all new surface pits with a Stormsack. The system will be located near the existing road to the east of the building and connect into the upgraded infrastructure. The new service road will not be treated by this infrastructure however will be treated by the new gross pollutant trap located in the northern carpark. Refer to SK-C0005 in Appendix B for further details.

#### 6.2.6 Treatment Nodes

The MUSIC model consisted of 2 treatment nodes as detailed in Table 7. Treatment node input parameters were based on the MUSIC modelling guidelines and sourced from the product supplier.

Treatment Device	Discussion
Gross Pollutant Traps	A gross pollutant trap is a treatment device designed to capture coarse
SPEL Stormsack	sediment, trash and vegetation matter in stormwater runoff. These
	Stormsacks are to be located within pits surrounding the buildings to
	provide pre-treatment to runoff generated from the ground and roof
	areas.
Tertiary Treatment	The SPEL Filter is a proprietary device containing Cartridge /
Device	Membrane filtration designed to remove nutrients and sediments
SPEL Filter	from stormwater runoff. These cartridges are to be located within
	the detention/treatment tank of the STEM building.
Gross Pollutant Trap	A new gross pollutant trap will be located in the northern carpark.
CDS equivalent	This GPT will replace the existing GPT and will be sized to treat the
	whole catchment that is being directed through it.

#### **Table 7: Selected Stormwater Quality Treatment Devices**

Refer to the MUSIC information attached in Appendix G for further details.

#### 6.2.7 Proposed Treatment Train

site layout. This treatment train is illustrated in Figure 4.

 Roof [Mixed]
 Image: SPEL Stormsacks (3)
 SPEL vault (1.00.85)
 SPELFitter (EMC 45) (1)
 Receiving Node

 Image: SPEL Stormsacks (3)
 SPEL vault (1.00.85)
 SPELFitter (EMC 45) (1)
 Receiving Node

 Image: SPEL Stormsacks (3)
 SPEL vault (1.00.85)
 SPELFitter (EMC 45) (1)
 Receiving Node

 Image: SPEL Stormsacks (3)
 SPEL vault (4.00.85)
 SPELFitter (EMC 45) (4)
 Image: SPEL Stormsacks (3)

 SPEL Stormsacks (3)
 SPEL vault (4.00.85)
 SPELFitter (EMC 45) (4)
 Image: SPEL Stormsacks (3)

A 'Treatment Train' was developed to target each of the pollutants of concern to be incorporated into the development

Figure 4: Proposed Treatment Train

#### 6.2.8 Results

The pollutant reductions for the ultimate developed phase of the site, with the inclusion of the detailed treatment train, as obtained from the MUSIC model and analysis are summarised in Table 8.

Pollutant	TSS (%)	TP (%)	TN (%)	GP (%)
Treatment Train Effectiveness	80	64.8	58.3	100
WQOs	80	60	45	90

**Table 8: Pollutant Removal Rates Discharge** 

As indicated in the table above, the removal rates for the target pollutants; total suspended solids (TSS), total phosphorus (TP), total nitrogen (TN) and gross pollutants (GP) are all above the water quality objectives stipulated in the State Planning Policy. Therefore, the proposed treatment train for these areas will yield satisfactory pollutant removal.

#### 7. BRISBANE CITY COUNCIL CODES

The relevant Brisbane City Council Codes with respect to engineering aspects for assessment of the Development Application have been addressed. The codes will assist in assessing operational works requirements. The codes addressed in this report include: -

Stormwater Code

The completed codes can be found attached in Appendix H of this Report.



NOTE: 1. ALL MANHOLE LIDS TO BE CLASS D UNLESS NOTED OTHERWISE.

REINSTATE PAVEMENT/ FOOTPATH THAT IS AFFECTED BY CONSTRUCTION OF NEW STORMWATER.

EXISTING STORMWATER NETWORKS IMPACTED BY CONSTRUCTION OF NEW BUILDING TO BE REMOVED





Annexure 3 to Schedule 1 – Ecological mitigation measures



Species	EPBC	NCA	Habitat	Likelihood of occurrence
Podargus ocellatus plumiferus (Plumed Frogmouth)		V	Subtropical lowland rainforest.	<b>Unlikely to occur</b> . A very narrow strip of potentially suitable habitat along Toowong Creek; however, this habitat is too fragmented in a highly urbanised landscape to support the species.
<i>Turnix melanogaster</i> (Black-Breasted Button-quail)	V	V	Semi-evergreen vine thicket and low microphyll vine forest, dry rainforest (softwood scrubs) of Brigalow Belt and scrubs on sandy coastal soils (Garnett et al. 2011).	<b>Unlikely to occur</b> . No suitable habitat.
Petauroides volans volans (Southern Greater Glider)	V	V	A variety of eucalypt-dominated habitats, including tall forests and low woodlands with hollow- bearing trees (McKay 2008).	<b>Unlikely to occur</b> . Potentially suitable habitat occurs; however, this habitat is too fragmented in a highly urbanised landscape to support the species.
Phascolarctos cinereus (Koala)	V	V	Eucalypt forests and woodlands (Martin et al. 2008).	<b>Unlikely to occur</b> . While suitable food trees are present, no evidence of Koala was detected, and the species is unlikely to use the habitat due to it being highly fragmented and embedded in an urbanised landscape with many threatening processes (traffic, dogs).
Acanthophis antarcticus (Common Death Adder)		V	Occurs in a wide range of habitats, particularly with deep leaf litter, but severely impacted by presence of Cane Toads (Ehmann 1992).	Unlikely to occur. Habitat is unsuitable due to habitat fragmentation in urbanised landscape, dominance of invasive grasses and lack of deep leaf litter in the ground cover.

Abbreviations: **EPBC** = status under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth); **NCA** = status under the *Nature Conservation Act 1992* (Queensland); CE = Critically Endangered; E = Endangered; V = Vulnerable; NT = Near Threatened; LC = Least Concern.

The small patches of woodland habitat in the study area do not support important habitat for any listed migratory species as prescribed by Commonwealth of Australia (2015a, b).

There were no active animal breeding places in any of the trees that may be cleared and therefore no requirement to prepare a Species Management Program under the NC Act. A freshly constructed drey (shelter) likely occupied by a Common Ringtail Possum (*Pseudocheirus peregrinus*) was found in the top of a Chinese Elm sapling within vegetation proposed to be cleared for the new school building footprint (see **Figure 1** for the location of the drey).

# 4.0 RECOMMENDED MITIGATION MEASURES

The following management measures are recommended to mitigate any impacts of the proposed development on environmental values:

- Ensure that the roots zones of trees within adjacent remnant vegetation are protected from development. There should be no works or hardening within the structural route zone. This zone is often equivalent to the extent of the canopy (or canopy drip line), although this should be conformed with an arborist for the subject trees;
- Fell trees away from vegetation to be retained to avoid unnecessary impacts on retained vegetation;
- Install and maintain appropriate sediment controls during earthworks on the site to minimise the flow of sediment into Toowong Creek, particularly during heavy rainfall events;



- Ensure a qualified and experienced fauna spotter-catcher is present to check vegetation for arboreal fauna (particularly the location of the possum drey), and safely remove any fauna immediately prior to vegetation clearing, releasing any captured fauna nearby but outside the works area; and
- Use native trees and shrubs in any landscape plantings to mitigate the loss of feeding resources associated with the native trees cleared for the proposed development.

Native fauna habitat in remnant vegetation within the site are currently being degraded by the ongoing establishment and spread of a variety of aggressively invasive weeds. Consequently, there are opportunities to improve the condition of retained habitats on the site through:

- Controlling invasive weed species, particularly Cat's Claw Creeper, Madeira Vine and Chinese Elm that are likely to cause a substantial increase in habitat degradation over time; and
- Planting native trees to increase native tree canopy cover to assist with rehabilitation of degraded patches adjacent to the existing informal car park.

Recommendations for the control of Cat's Claw Creeper and Madeira Vine are outlined in State of Queensland (2016b, c). Native tree species that would be appropriate in tree plantings at the site include:

- Eucalyptus tereticornis;
- Eucalyptus microcorys;
- Eucalyptus propinqua;
- Eucalyptus siderophloia;
- Eucalyptus curtisii; and
- Corymbia citriodora.

# 5.0 PROJECT IMPACTS AND LEGISLATIVE REQUIREMENTS

The assessment of the significance of impacts of an action on matters of national environmental significance (MNES) protected under the EPBC Act is prescribed by a variety of policy statements that provide guidelines for the assessment of impact significance (e.g. Commonwealth of Australia 2003, 2013, 2015a, b). The assessment of the significance of impacts of an action on matters of state environmental significance (MSES) protected under various statutes is prescribed by the Queensland Environmental Offsets Policy Significant Residual Impact Guideline (State of Queensland 2014a).

The Project proposes to remove 33 native trees for the proposed new school buildings and one native tree for a walkway (34 trees in total), nearly all of which appear to have been planted as part of past landscape plantings, and all of which occur in areas mapped non-remnant by the State. While the trees proposed for removal provide seasonal foraging resources for fauna, including seasonally for Grey-headed Flying-fox and possibly rarely for Swift Parrot, the small number of trees proposed to be cleared means that the magnitude of the impact is very small. When assessed against the criteria for the assessment of impact significance prescribed by the relevant guidelines for MNES and MSES, the Project is highly unlikely to result in a significant impact on any fauna species listed as threatened, near threatened or migratory under the EPBC Act and/or NC Act.

All native trees within the existing informal car park will be retained; however, four dead trees located within or close to the informal carpark will be removed for safety reasons. The Project avoids any direct impacts on State-mapped remnant vegetation and Essential Habitat within the subject site. While no clearing of least concern and of concern remnant REs is required, it is understood that such clearing would be exempt at this location and for the proposed development under Schedule 21, Part 2 (g)(ii) of the Queensland Planning Regulation 2017 (clearing on

Annexure 4 to Schedule 1 – Traffic measures



# 6.0 SUMMARY AND CONCLUSION

Lambert & Rehbein has been commissioned by the Department of Housing and Public Works (DHPW) to undertake a Traffic Assessment for the Department of Education and Training (DET) to inform the future site master planning of the Queensland Academy for Science Mathematics and Technology (QASMT).

QASMT proposes to construct additional infrastructure over three stages as outlined in **Section 3** of this report. To accommodate the future student enrolment, this report recommends the following:

# Parking/Transport Access Management Plan

• A detailed parking/transport access management plan be developed for QASMT. This will require the current QASMT school traffic management plan to be updated to reflect the various recommended changes. The updated management plan will be required to cater for active, private and public movements to and from the school, adequately dealing with the safety for students, staff, parents and visitors to the site during peak activity periods. Strict policing of the loading zone to enforce the 2min max parking. This will be critical to the operation of the Student Set-down and Pick-up facilities to ensure queuing does not overflow and impact flow along Bywong Street;

# On Street Set-down/Pick-up

- Convert existing on-street all day parking, highlighted via blue arrows in **Figure 2-13**, along the school's frontage (90m long) and adjacent to West Toowong Bowls Club's (110m) to create thirty three (33) 2min parking bays.
- Enforcement of the 2min max parking at all set down / pickup facilities is critical to ensure each set down / pick up bay can service in the order 20-30 vehicles per hour. The conversion of approximately 33 all day parking bays into 2min max parking bays will potential to process 660 vehicle per hour.

# Pedestrian Crossing

• Convert the existing Bywong Street mid-block pedestrian crossing, as illustrated in Table 4-2, to a supervised pedestrian zebra crossing. Students should be educated to only cross Bywong Street at this formalised crossing location. The crossing should be controlled during school peak periods to limit disruption of vehicular flow towards the set down / pick up facilities that will now be on either side of Bywong Street.

# Staff Parking

- Miskin Street Overflow Car Park to be formalised to cater for the following demand:
  - Stage 1 formalise 47 parking bays within informal parking area;



- Stage 2 increase formal parking to a total of 64 parking bays; and
- Stage 2 increase formal parking to a total of 71 parking bays.
- QASMT has suggested that an area to north of the oval, as highlighted via red in Figure
   4-5, could cater for approximately fifteen (15) parking bays if required.

As a consequence of the increase to 1,200 student enrolments by 2021, it is estimated that the increase in traffic will generate minimal increase in delay (<42 seconds) at each approach and does not require mitigation measures, as documented in **Section 5**.



The School should continue promote the use of active and public transport and car-pooling to help reduce the amount of vehicles that travel to and from the School on a regular basis.

# 2.5 EXISTING ON-SITE CAR PARKING ARRANGEMENTS

As previously discussed in Section 2.1, within the QASMT's grounds, as illustrated in Figure 2-13, there are three (3) formal parking areas, numbered #1-3 in Figure 2-13, and a set-down / pick up zones, numbered #4 in Figure 2-13.

Additionally on-street parking is available along sections of Bywong Street, highlighted via blue in **Figure 2-13**, and a loading zone (2min max) is available between the entry points of the converted pick up / drop off zone, highlighted via pink in **Figure 2-13**. Parking restriction (no standing) do occur along sections of Bywong Street due to narrow carriageway widths, as highlighted via yellow in **Figure 2-13**.



Figure 2-13 On-street and Off Street Car Park Locations

The following outlines a description of each car park and the current use:

- Bywong Street Southern Staff Car Park This car park provide nine (9) car parking spaces – two (2) visitor car parks, four (4) staff car parks, one (1) loading zone, one (1) service bay and one (1) PWD bay.
- 2. Bywong Street Northern Car Park This car park provides ten (10) car parking spaces and provides a circulations aisle that continues east to the staff car park, numbered #3 in **Figure 2-13**, near the oval.

## Schedule 2 – Notice of how submissions were dealt with

### Submissions received during Minister's consultation

On 28 September 2018, I gave a notice to council and the landowner advising that I was proposing to make the designation and inviting submissions within 25 business days.

Public consultation actions were also conducted by the entity inviting submissions between 8 October 2018 and 9 November 2018 for 25 business days.

I received 74 submissions during this period from local residents, elected representatives, community groups and council.

A summary of how I dealt with the submissions is provided in the table below.

Matter/s raised by the public	Response	
1. Traffic impacts on surrounding area		
These are residential streets, with steep hills, and unsuitable for large volumes of traffic.	A Traffic Impact Assessment (TIA) has been submitted with the Environmental Assessment Report (EAR). The TIA states that Bywong Street and Miskin Street, which	
Dampier Street, Howitt Street and Mossman Street cul-de-sacs should not be used for staff and student parking.	run along the eastern and western boundaries of the school, are designated as a Neighbourhood Road (Major) and District Road respectively in the council road hierarchy plan.	
Traffic on Bywong Street should be redirected to Miskin Street, and a ring road created around the oval.	The main vehicular and pedestrian access points to the school are located in Bywong Street and Miskin Street. Formalised staff parking is not proposed via the Dampier Street cul-de-sac, which is a local road. I have	
Traffic counts were done when many students were not in	included a requirement in relation to the use of this vehicular access for occasional use only.	
Attendance. More active travel options should be considered. Public transport should be increased around the site.	To facilitate the increase in student numbers at the school, the TIA recommends changes to the on-street parking arrangement on Bywong Street. I have included a requirement in relation to further consultation with council about these measures on Bywong Street.	
	The provision of additional staff parking on site is proposed to accommodate the proposed number of staff and offset the loss of on-street parking due to the proposed changes on Bywong Street. This will result in a total of 137 formalised spaces available on-site for staff parking. I am satisfied that this amount of parking is sufficient, and I have included a requirement relating to the provision of these spaces.	
	The TIA includes vehicular traffic counts on local roads surrounding the site and an assessment of the proposal's impact on the Stanley Terrace/Bywong Street and Keltie Street/Miskin Street intersections, along with background traffic increases. An analysis of these intersections demonstrates that they each have	

significant remaining capacity to account for the projected increase in students and staff numbers.
The entity has provided further information to confirm that traffic counts were undertaken at an appropriate date and time when the majority of students were in attendance. Accordingly, I am satisfied that that the traffic impact upon local intersections has been appropriately analysed and addressed.
While there are existing issues relating to the topography of the area and the gradient of Bywong Street, I consider it unreasonable to require a ring road around the school oval for student pick up and drop offs for student safety reasons.
The entity has confirmed that the number of students catching public transport to the site is currently higher than for a local catchment school, with many students catching the train and walking from Taringa Station (approximately 900m walking distance) or from the high-frequency bus services along Moggill Road (approximately 500m walking distance). Along Moggill Road there are between 15-20 buses per hour in the AM and PM peak. The proposed pedestrian path through the site from Miskin Street will provide improved access for students and staff to these bus services on Moggill Road. Accordingly, I am satisfied that there are currently adequate train and bus services servicing the site, however, the entity will continue to liaise with Translink around this matter as the student population grows over time.
In relation to the active travel options available, I note that the site is adjacent to Council's secondary bicycle network. Accordingly, I have included a requirement in relation to the provision of cycle parking at a rate of 1 per 5 additional students.
 I am satisfied that the increase in traffic and the impacts on the surrounding road network have been appropriately addressed.

# 2. Environmental assessment and consultation process

The EAR does not comprehensively assess all environmental impacts of proposal. Inadequate public consultation has taken place.	<ul> <li>I am satisfied that the EAR includes:</li> <li>appropriately detailed site plans and descriptions of the proposed buildings and uses on site</li> <li>an appropriately detailed assessment of the environmental, social and economic impacts (both positive and negative)</li> <li>how any negative impacts could be avoided or mitigated</li> <li>whole-of-life impacts and off-site impacts (i.e. construction and operation).</li> </ul>
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Adjacent residents and the local community around QASMT were given 20 business days to make a submission on the EAR. This was further extended for another 5 business days. Further to this, the entity held a community workshop in early 2018 to discuss the project and gather information about residents' concerns. The proposal was subsequently amended where possible to respond to these concerns.
Accordingly, I am satisfied that the entity has submitted the appropriate amount of information on the proposal and allowed for adequate public consultation.

# 3. Impacts upon Toowong Creek and wildlife habitat from the development and the proposed 'Northern Hub' building

The 3-storey 'Northern Hub' building is proposed to be built	The new 'Northern Hub' building is proposed to be set back from the Toowong Creek by approximately 24m.
along Toowong Creek and will obstruct wildlife movements and impact upon the riparian zone.	This setback distance is greater than the existing Block J on-site and many residential dwellings on the other side of Toowong Creek. Accordingly, I am satisfied that
Light will 'leak' from the northern side of the building and impact upon nocturnal wildlife in Toowong Creek.	the proposed buildings, to be located adjacent to the existing built up part of the site, have been sited to minimise impacts to on-site environmental values, including Toowong Creek.
The construction phase will have a tremendous noise and vibration impacts upon wildlife.	I have included a requirement in the designation for a Vegetation and Fauna Management Plan (VFMP) and a Rehabilitation and Revegetation Plan (RRP) to
No Construction Management Plan has been released for consultation.	address, minimise and mitigate impacts to environmental values. Importantly, the RRP must demonstrate a strategy to 'enhance' the environmental
Why has no Landscaping Plan been submitted?	values and functions of the adjacent Toowong Creek from Bywong Street through to Miskin Street. The requirement also states that the RRP measures are implemented in conjunction with the delivery of the three-storey 'Northern Hub' building.
	The entity has confirmed that interior classroom lighting is time managed and timings can be controlled by the school. The proposed building will be glazed, airconditioned, with no windows that open towards the creek. Building elevation plans show a screen that would further obscure light if lighting is left on inside the building at night. Carpark security lighting will also be directed away from the creek. Accordingly, I am satisfied that any lighting impacts upon the Toowong Creek area will be minimal and can be appropriately managed by the school. I have included a requirement that operational and design measures be implemented to minimise environmental impacts to Toowong Creek through day to day operations of the school. Construction impacts, including sediment controls
	during earthworks on site, dust mitigation, and standard hours of works, will be managed through a

	Construction Environmental Management Plan (CEMP). The entity has confirmed that all construction vehicle access is proposed via the Miskin Street entrance. I have included a requirement relating to the preparation and submission of a CEMP prior to the works commencing. The CEMP must specifically address proximity of works to Toowong Creek and measures to mitigate potential impacts on ecological and environmental values and functions, including stormwater quality.
	The entity has confirmed that trees and plants removed during construction will be replaced by post- construction landscaping works. I have included a requirement relating to the mitigation measures contained in the ecological assessment report submitted with the EAR, along with general requirements around the management and protection of flora and fauna on-site, and replacement planting.
	With the inclusion of the noted requirements, I am satisfied that the proposed development is unlikely to significantly impact on-site environmental values and that appropriate design and mitigation measures have been proposed to minimise and mitigate any such impacts.
4. Alternative sites for new build need to be removed	lings need to be considered so that trees do not
The football field should be considered as an alternative location for the new buildings to alleviate the need to remove trees	I do not consider it appropriate for permanent buildings to be constructed on the school's oval due to the need to provide an appropriate amount of recreation and open space for students.
from the site. The site includes significant vegetation under the Council's Natural Assets Local Law.	The ecological assessment contained in the EAR confirms that no endangered, threatened or vulnerable fauna or flora species protected by the <i>Nature Conservation Act 1992</i> or the <i>Environmental Protection</i>
The existing buildings on site should be increased in height instead of new buildings being constructed.	and Biodiversity Conservation Act 1999 were detected during the ecologist's survey within the area to be developed. Accordingly, the ecological assessment report concludes that the proposal is highly unlikely to have a significant impact upon Matters of State or National Environmental Significance.
	I am satisfied that the entity, by conducting a community consultation session on the proposal and listening to community concerns about tree clearing, has sought to minimise the removal of vegetation on the site where possible.
	As per the response to item 3, I have included a requirement for a VFMP and RRP within the designation to address, minimise and mitigate impacts to environmental values. The VEMP must address

	assessment report, along with general requirements around the management and protection of flora and fauna on-site, and replacement planting.
	I understand that the school must remain open to students during the school term, therefore it is not possible to demolish the existing buildings and replace them with taller buildings while at the same time, continue with normal classes. Furthermore, given the local context, taller buildings than proposed are not desirable. Accordingly, I am satisfied that new buildings must be constructed on site to meet the school's enrolment needs, and that the proposed built form has been appropriately sited and designed to minimise the loss of vegetation.
	With the inclusion of the noted requirements, I am satisfied that the proposed development is unlikely to significantly impact on-site environmental values and that appropriate design and mitigation measures have been proposed to minimise and mitigate any such impacts.
5. Impacts of the proposed STE	M building
Height of the proposed STEM building will tower over residences upon Dampier Street and should be limited to 2-storeys in height. Removing trees on the steep embankment to build the STEM building will cause erosion and loss of wildlife babitat	The existing buildings on site are predominantly two and three-storey buildings. The proposed eastern STEM building consists of three storeys, including two levels of classrooms with disability access, plus an open area/undercroft area on the slope below, and a small maintenance/plant equipment area at ground. The height of the proposed roof level is approximately the same height as the existing Block B.
Will the STEM building create an increased flood risk?	Due to the steep topography of the area, I understand that the STEM building is likely to be visible by residents on Dampier Street, however it will be approximately 80m distance from these residences. Accordingly, I am satisfied that the proposed height of the building does not unreasonably impose upon surrounding or adjoining residential amenity. I have included a requirement in relation to the plan of designation for the site, which outlines the maximum number of storeys for both the eastern STEM and Northern Hub building.
	As detailed above, I have included a requirement relating to the preparation and submission of a CEMP prior to the works commencing, which will manage any erosion issues created during the construction of the eastern STEM building.
	As per the responses to items 3 & 4, I have included a requirement for a VFMP and RRP within the designation to address, minimise and mitigate impacts to environmental values. The VFMP must address mitigation measures contained in the ecological

	assessment report, along with general requirements around the management and protection of flora and fauna on-site, and replacement planting.	
	The Site-Based Stormwater Management Plan (SMP) submitted with the EAR includes recommendations to reduce impacts upon water quality from run-off leaving the site. The SMP includes a comprehensive assessment of the impact of increased rainfall run-off from the site, the required level of flood immunity for the proposed temporary classrooms, and the appropriate level of stormwater detention on site. Accordingly, I am satisfied that stormwater and flooding issues have been appropriately addressed. I have included a requirement in relation to the recommendations of the SMP.	
6. Impacts from temporary build	ings	
No definition of 'temporary' has been provided. The ecological, acoustic and traffic impacts of the proposed temporary classrooms has not been considered	The EAR describes the proposed staging of the masterplan project. The temporary buildings proposed on the existing tennis courts will be required until the completion and successful transfer of students into the new buildings. I have included a requirement in relation to the temporary use of these buildings.	
There is no need to raise the temporary classrooms as the tennis courts did not flood in 1974 or 2011.	I am satisfied that the ecological and traffic impacts of the proposed temporary buildings have been adequately addressed by the EAR. The acoustic impacts of the buildings are outlined in my response below.	
Vehicles parking near the tennis courts are damaging the 'Protected Plant Trigger Zone'.	I am satisfied that the height of the proposed two- storey temporary classrooms, which has been dictated by the SMP and the overland flow path during heavy rainfall events, is appropriate.	
	The southern portion of the site intersects with a 'high risk area' for protected plants under the <i>Nature</i> <i>Conservation Act 1992</i> on the Department of Environment and Science trigger mapping. The ecological assessment report found no plant species that had the potential to be protected under <i>Nature</i> <i>Conservation Act 1992</i> . Therefore, I am satisfied that the construction of the temporary buildings and/or parking around this area is not likely to impact upon protected plants.	
7. General amenity concerns, including acoustic and air quality impacts, concerns about privacy, continued public access to school		
The EAR does not include an acoustic assessment for the development. How close will the proposed pedestrian path be to the back of	The proposed Northern Hub building is located approximately 40m from the nearest dwelling on the other side of Toowong Creek. The proposed eastern STEM building is located approximately 80m from the nearest dwelling on Dampier Street, while the temporary classroom buildings are located across the	

my property? I am concerned	road from the nearest dwelling and will contain only
about privacy impacts.	learning spaces.
Minimise the times the students have access to school buildings/grounds.	The temporary buildings will be airconditioned and do not have any no direct openings or entrance points from the Dampier Street facade. The verandas will face
The school should not be allowed to lease/hire and allow third parties to use facilities particularly after hours/ evenings and weekends. Request that the Vera St Community Gardens, school oval and Toowong Creek remain accessible to local residents	inwards to the site to minimise privacy impacts upon Dampier Street residents.
	Accordingly, I do not consider an acoustic assessment of the proposed buildings to be a reasonable
	requirement and consider that the proposal will have a negligible impact upon local residential amenity. As an existing established school site, I consider the proposal to be consistent with the current use.
	The entity has confirmed that the proposed pathway from Miskin Street will be setback approximately 15m from adjoining residential boundaries. Accordingly, I consider that the impacts upon residential privacy will be minimal.
	I do not expect the proposed increase in school traffic to have a significant impact upon local air quality. Dust mitigation during the construction phase will be managed through a CEMP, as per previous responses.
	The proposed school opening times and its use by local residents and other parties is a matter for the entity and the School Principal to manage. However, I understand that public access to the Vera Street community gardens and other areas on site is not affected by the proposal.

# 8. Funding arrangements, school catchment issues

Consider redistributing funds to schooling for inner city families whose local schools (secondary and primary) are struggling to cater for the increases in enrolments. The EAR does not present a case that the pedagogy and culture of QASMT is suitable for the year 7, 8, 9 cohort it is looking to introduce. QASMT should be a local	I am satisfied that it is the entity's responsibility to determine the appropriate level of funding for State schools in Queensland, monitoring population and demographic changes over time, determining appropriate student age levels, and appropriate catchment areas. Importantly, I consider that the proposed built form to accommodate the projected increase in students is appropriate for the site and has been sited and designed to adequately consider and address all potential impacts.	
catchment school.	potential impacts.	
Matters raised by council	Response	
9. Traffic impacts and on-site parking, active travel		
Council's planning scheme		

Council's planning scheme	I am satisfied that the proposed amount of parking on
requires a total of 158 staff parking	site (137 spaces) is adequate and appropriate. This is
areas to be provided on site.	supported by the TIA provided with the EAR. I have

A sight distance accompant is	included a requirement in relation to the provision of
A signit distance assessment is	included a requirement in relation to the provision of
recommended for the access to the	on-site carparking.
Miskin Street overflow parking area.	I am satisfied that vehicular sightlines from the Miskin Street vehicular access will not change because of the
Any upgrade works to the	proposal. This is an existing access that is currently
Mossman St/Stanley Tce	used by staff and visitors to the school
interportion should be included in	
	The entity has confirmed that there is no intention for
the proposal.	additional vehicles to access the site via Dampier
The school should demonstrate appropriate school travel	Street and the Mossman/Stanley Terrace intersection, except for the provision of 1 disabled parking space
behavioural programs are in place.	beside the temporary classrooms. I have included
	requirement to limit staff parking access from this
	access point. I am satisfied that the school's Travel
	Management Plan will also encourage all student drop-
	offs to occur via Bywong Street

# 10. On-street parking, passenger loading zone, and Bywong St crossing facility

Council is supportive of a passenger loading zone (2-minute parking restrictions in the AM and PM peak) along the school frontage on Bywong Street on the eastern alignment, but not the western alignment as this will compromise student safety. Affected residents will also need to be consulted. The proposal to limit the exit from the bus stop zone to left only should consider the steep grade of Bywong Street. Council recommends the children's crossing be manned by a school crossing supervisor.	I note Council's comments on the proposed 2-min loading zones, pedestrian crossing, bus stop zone and parking areas on Bywong Street. Accordingly, I have included a requirement for the entity to discuss these matters further with Council to reach an appropriate outcome and consult further with residents. I understand that the school can apply to the Department of Transport and Main Roads to supervise the pedestrian crossing, which is proposed to operate in the AM and PM peak.	
11. On-site sporting facilities		
Mitigation strategies should be employed to manage temporary decrease in on-site sporting facilities.	The entity has confirmed that the school will continue to use the existing oval that is not otherwise impacted by construction. During school hours the use of the oval will be timetabled to ensure appropriate access and utilisation is provided. I consider this be an appropriate response to the temporary loss of recreation space.	
12. Mitigation of ecological impacts		
Council requires that appropriate planting is provided within the site to offset tree removal, and the provision of nesting boxes for fauna displaced by the works.	The ecological assessment report submitted with the EAR includes recommendations about the mitigation of ecological impacts, including the use of native trees and shrubs to replace the vegetation removed from the site. As per the previous responses, I have included a	

# 13. Safety and efficiency of infrastructure networks

It should be demonstrated that the long-term safety and capacity of existing infrastructure networks servicing the site will not be adversely impacted by the proposal.	I have included a general requirement relating to the need upgrades to local infrastructure (water, sewer, electricity and telecommunications) if reasonably required by the proposal.
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