O'NEILL



CONSULTING ENGINEERS

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Principal Consulting

Structural

Civil

Mechanical

Electrical

Hydraulics

Fire Protection

Lift

INFRASTRUCTURE AND DEVELOPMENT CONTRIBUTIONS REPORT

PROPERTY: PRECINCT 16 WEST 41-59 STEPHENSON STREET & 5-9A SUTTON STREET SOUTH KINGSVILLE, VIC 3015

CLIENT: METRO PROPERTY DEVELOPMENT LEVEL 4, 484 ST KILDA ROAD MELBOURNE VIC 3004 PO BOX 7131, ST KILDA ROAD MELBOURNE VIC 8004

> O'NEILL GROUP PTY LTD 2 OXFORD STREET SOUTH YARRA VIC 3141

 PROJECT NO:
 7991

 DATE:
 28 April 2021

7

VERSION:



O'NEILL GROUP PTY LTD CONSULTING ENGINEERS AND MANGERS

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REVISION	DATE	ISSUE FOR	APPROVED FOR ISSUE
1	12 th December 2017	Review	MD
2	17 th October 2018	Final	MD
3	29 th March 2019	Amended	MD
4	17 th March 2020	Council comments	MD
5	30 th June 2020	Council comments	MD
6	23 rd March 2021	Council comments	MD
7	28 th April 2021	Council comments	MD

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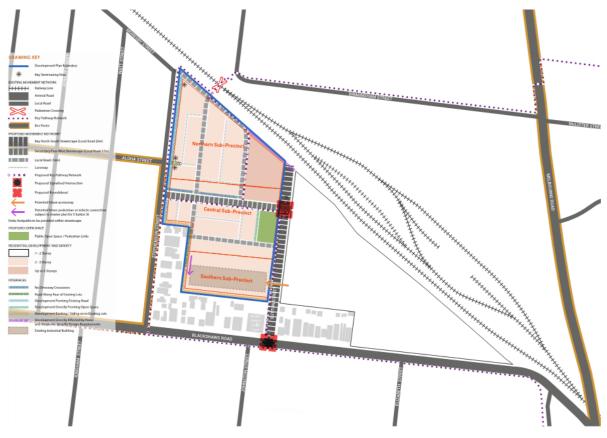
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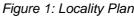
1.00 INTRODUCTION

We have undertaken preliminary investigations in relation to the provision of services (roadworks, stormwater, water, sewer, gas, electricity and communications) to the proposed development at 41-59 Stephenson Street and 5-9A Sutton Street, South Kingsville. This report investigates the suitability of the existing engineering infrastructure and the requirements of the relevant authorities to serve the future development of the site. This report also provides a summary of the proposed Development Contribution works.

The site known as Precinct 16 West is currently zoned industrial and is owned/managed by Metro Property Development, Land Real and Brymart-Able Industries. The report has assumed a total yield of 650 lots as an upper limit to test the capacity of the surrounding infrastructure. Hobsons Bay City Council has provided in-principle approval to proceed with formal lodgement for a re-zoning application.

The site is bounded by residential properties to the south facing Blackshaws Road, VicTrack Reserve to the north, Stephenson Street to the west, Sutton Street to the east and a mixture of existing and proposed residential properties surrounding the site. The former Caltex site to the east is known as Precinct 16 East and is currently in planning stage for residential development.





2.00 WATER

City West Water is the responsible authority for the provision of water in this area. Asset plans from the authority indicate there is an existing 150mm diameter water main in Sutton Street and 100mm diameter water mains Stephenson Street and Blackshaws Road.

City West Water conditions for connection for the adjoining development of the former Caltex site to the east requires the developer to upsize and replace the water mains within Blackshaws Road from 100mm diameter to 225mm diameter. We anticipate that City West Water may require this development to upgrade the water mains within Blackshaws Road given the scale of the development. A formal application has been forwarded to City West Water for feasibility advice to confirm authority connection and development requirements.



Figure 2: Water Plan

Subject to confirmation from City West Water for pressure and flow information, allowance should be made for pumps and break pressure tanks for fire water services if in the likely-hood that there will be low pressures in the street water main. City West Water requirements will be subject to further investigation once detailed design commences.

3.00 SEWER

City West Water is the responsible authority for the provision of sewer in this area. Asset plans from the authority indicate there are existing 150 and 225mm diameter sewer mains and easements running through the site,

We anticipate that the existing sewer mains will have adequate capacity to cater for the development of the site based on information previously provided by City West Water for the development of the former Caltex site to the east. As part of the development of the former Caltex site, City West Water requires a new sewer main to service the former Caltex site to be connected to the existing 225mm diameter sewer within the subject site. A formal application has been forwarded to City West Water for feasibility advice to determine development requirements.

Build over clearances from the existing and proposed sewer mains and easements will need to be met. Building structures over the existing and new easements will not be permitted. Also, a minimum clearance of 1000mm shall be maintained from the edge of the existing sewer mains pits and pipes located within the site.



Figure 3: Sewer Plan

4.00 ROADS AND STORMWATER DRAINAGE

The Hobsons Bay City Council is the responsible authority for the provision of roads and stormwater drainage in this area. The council asset plan indicates that there are existing stormwater drains within Moresby Street, Stephenson Street and Blackshaws Road. There are no existing stormwater drains within Sutton Road. Based on Council's flood modelling results, Stephenson Street, Sutton Street, Blackshaws Road, Moresby Street and Aloha Street will be affected by the development. Council advise that the stormwater drainage within Sutton Street is to be upgraded from Moresby Street to Blackshaws Road and on Blackshaws Road from Stephenson Street to Elizabeth Street.

However, based on our review of the existing conditions, the development of this site should have little or no impact on the existing drainage within Blackshaws Road as the site is located downhill of Blackshaws Road and does not connected to the council drainage system within Blackshaws Road.

The existing road pavements within Sutton Street are partly asphalt to the south and gravel to the north. Council has advised that the Sutton Street road is to be re-constructed including new asphalt pavements, drainage, kerbs, nature strips, crossovers and undergrounding of the existing overhead power supply cables.

Council has advised that the Legal Point of Discharge stormwater connection for the overall site is to the existing Melbourne Water main drain located in Moresby Street.

As part of the development of the former Caltex site to the east a new council stormwater outfall drain and easement is required to be installed along the north boundary of the site adjacent to the VicTrack Reserve connecting to the Melbourne Water main drain in Moresby Street. It is proposed to connect this site to the new outfall drain which will also connect the Sutton Street drainage system subject to council requirements and approval.

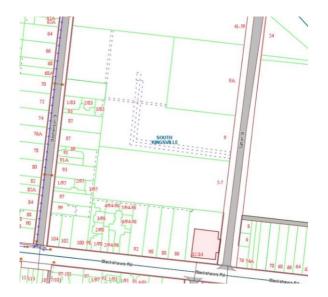


Figure 4: Hobsons Bay City Council Stormwater Asset Plan

The Melbourne Water asset plan indicates that the council drainage systems in this area connect to an existing Melbourne Water main drain located within Moresby Street which runs north under the VicTrack Reserve – refer Figure 5 below.

The asset plan also indicates that part of the site is subject to flood inundation as shown below. The advice from Melbourne Water indicates an estimated flood level of RL13.86m AHD for 1 in 100 year storm (AEP 1%) – Refer Appendix 2. This flood level will require floor levels to be set at RL14.16m (300mm above flood level). This minimum floor level is only about 500-600mm maximum above the existing natural ground levels at the northern portion of the site. Whilst Melbourne Water will need to be consulted during preparation or assessment of the planning permit application, we do not expect this will significantly impact on the development proposed.



Figure 5: Melbourne Water Stormwater Asset Plan (2017)

The Victorian Government property information for this area indicates the site at 41-59 Stephenson Street is located within a Special Building Overlay SBO (flooding). Refer Planning Property Report and Figure 6 below. The Hobsons Bay City Council flood maps are also shown in Figure 7 below.

The SBO appears to be located within the VicTrack railway reserve adjacent to the site loacted along the north boundary of the site. It is proposed that the lots are filled above the flood level and the development would be in accordance with Melbourne Water guidelines for development on flood prone land. The development will be required to comply with Melbourne Water Guidelines for Development on Flood Prone Land.

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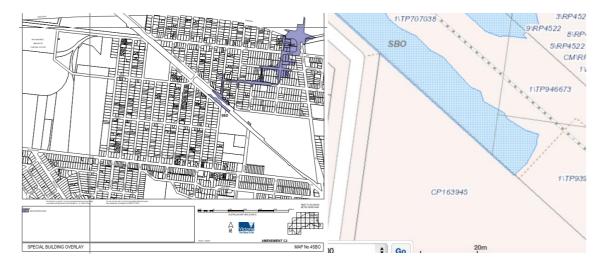


Figure 6: Victorian Government Special Building Overlay SBO (Flooding) Plan

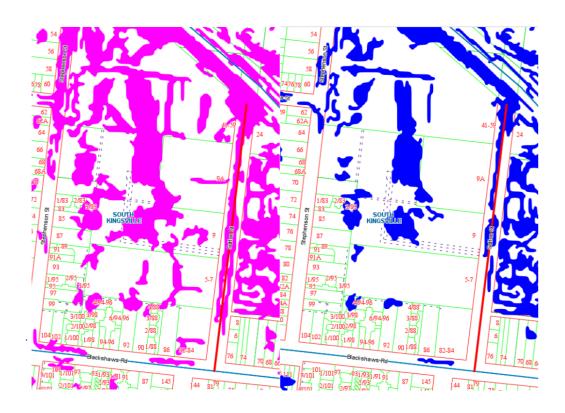


Figure 7: Hobsons Bay City Council Flooding Maps 1-100 and 1-10 year ARI

Water Retention

The requirements for water retention will be satisfied by the installation of oversized pipes within the proposed road reserves. The sizing of the drainage pipes within individual properties will be sized to accommodate the upstream catchment and include any catchment areas that proposed to feed into the site.

5.00 DEVELOPMENT CONTRIBUTION WORKS

The Hobsons Bay City Council have required the following infrastructure upgrades to support the development. Refer Figure 8 below:

- a) Undergrounding existing power lines in Sutton Street.
- b) Sutton Street road and drainage works inlcuding new roundabout.
- c) Upgrade stormwater drainage in Blackshaws Road.
- d) Signalised intersection at Sutton Street and Blackshaws Road.

Sutton Street will be delivered in 3 Stages generally as noted below and as shown in Appendix 1:

Stage 1 – From the end of limit of works for the intersection up to and including the proposed roundabout (excluding footpath and landscaping on the western side of the road).
Stage 2 – Footpath and landscaping on the western side of the road, south of the roundabout and on the eastern side of the road north of the roundabout.

Stage 3 – Works north of the proposed roundabout.

The intersection will be delivered in Stages generally as noted below and as shown in Appendix 4:
Stage 1 – Interim (East) – Works within Sutton Street on the eastern side of the road (to create the turning lanes from Sutton Street onto Blackshaws Road).
Stage 1 – Interim (West) – Works within Sutton Street on the western side of the road.

Stage 2 – Ultimate works – Installation of signals.

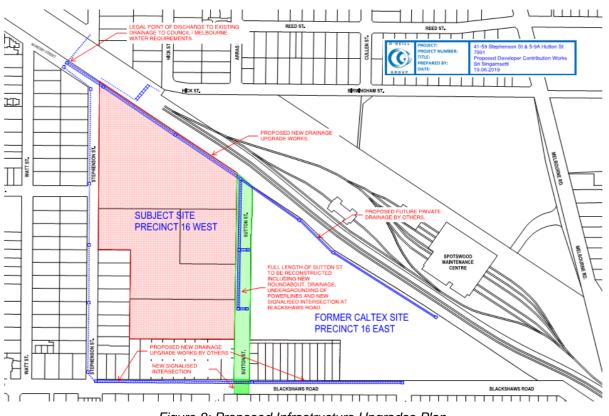


Figure 8: Proposed Infrastructure Upgrades Plan

A preliminary assessment of the proposed council Developer Contribution infrastructure works has been undertaken and the estimated budget costs for these works is provided below and in the report Appendices.

Hobsons Bay City Council and Mesh (consultants), in consultation with the land owners, have also prepared a report titled *Precinct 16 West – Infrastructure delivery and Apportionment Strategy* that provides a summary of the proposed infrastructure items including a recommendation on how the works will be delivered. This document is attached in the Appendix 7.

Council is requiring that infrastructure items be secured by way of a Section 173 Agreement and Council's preference is that these will be delivered as Works in Kind. It is noted that as part of the Victorian Civil and Administrative Tribunal (VCAT) mediation related to Precinct 16 East development, Council entered into a Section 173 prepared by Equipe Lawyers, on 31 August 2018, for :

- a) Financial contribution of 46% of the cost of for construction of Sutton Street.
- b) Financial contribution of \$200,000 for a signalised pedestrian crossing.
- c) Financial contribution of \$100,000 towards the full signalisation of the intersection of Sutton Street and Blackshaws Road (if required).
- d) Public open space area and shared pedestrian/bicycle path.
- e) Left and right turn lanes from Sutton Street onto Blackshaws Road.

Underground of existing power lines to west side of Sutton Street (estimated costs \$750,000, noting a capped liability of \$750,000).

The existing overhead powerlines and poles on the west side of Sutton Street will be removed and relocated below ground as part of the Sutton Street re-construction works. The overhead cables will be relocated below ground from the existing pole in Sutton Street near Blackshaws Road. Refer the O'Neill Group letter dated 19 February 2021 in the Appendix 6.

Sutton Street Road and Drainage Works including new roundabout (estimated costs \$1,368,354).

As part of the re-development of the site, the existing road in Sutton Street will be reconstructed including new asphalt pavements, roundabout, stormwater drainage, concrete kerb and channelling, nature strip and footpaths as per the Council JDS Sutton Street rehabilitation drawings – refer Appendix 1. The stormwater drainage for Sutton Street will be upgraded from Blackshaws Road to Moresby Street. This can be designed to cater for overland flows from Blackshaws Road.

The works will be delivered in stages as shown below and in Appendix 1.

41-59 Stephenson St & 5-9A Sutton St, South Kingsville Infrastructure & Developer Contributions Report, Version 7 Stage 1 (which may itself be divided into stages) – From the end of limit of works for the intersection up to and including the proposed roundabout (excluding footpath and landscaping on the western side of the road).

Stage 2 – Footpath and landscaping on the western side of the road, south of the roundabout and on the eastern side of the road north of the roundabout.

Stage 3 – Works north of the proposed roundabout.

The total estimated cost of these works is \$1,368,354 (refer Appendix 3) with 46% of the cost of these works to be allocated to the development of Precinct 16 East and the remaining 54% to be allocated to Precinct 16 West. The total cost to be allocated to Precinct 16 West is estimated to be **\$738,911**.

Upgrade stormwater drainage in Blackshaws Road.

The development of this site will have little or no impact on the stormwater drainage system within Blackshaws Road. The Precinct 16 West site is located downhill of Blackshaw Road and downstream of the existing council drainage system within Blackshaws Road. The subject site does not front Blackshaws Road and is remote from Blackshaws Road to the south of the site. Any flooding issues or flood levels within the site due to overland flows from Blackshaws Road can be addressed in the development of the site to ensure floor levels are above the applicable flood levels. Any drainage upgrade works in Blackshaws Road if required is a matter for council and will not be undertaken as part of the development of this site.

Intersection Works - Signalisation of intersection at Sutton Street and Blackshaws Road (estimated cost \$1,373,010).

It is proposed to provide an upgraded and signalised intersection at the intersection of Sutton Street and Blackshaws Road. Refer to Appendix 4 for the preliminary designs for the intersection layouts and to Appendix 5 for the preliminary costs provided by Traffix Group. The intersection designs have been prepared and updated as per the council comments to ensure that B-double trucks can continue to access Sutton Street.

The intersection will be delivered in Stages as noted below and as per the designs in Appendix 4:

Stage 1 – Interim (East) – Works within Sutton Street equivalent in costs to the creation of the left and right turning lanes from Sutton Street onto Blackshaws Road as per the existing 173 Agreement.

Stage 1 – Interim (West) – Remaining required interim works within Sutton Street. Stage 2 – Installation of signals.

6.00 GAS

Ausnet services is the responsible authority for the provision of gas in this area. The site is located in a high-pressure gas area (over 70 kPa). Asset plans from the authority indicate there are existing 40, 50 and 300mm diameter gas distribution mains within Stephenson Street and 63mm diameter gas distribution mains in Blackshaws Road and Sutton Street.

There is sufficient existing gas infrastructure within the vicinity of the site to cater for the proposed development. The development can connect into the existing mains in Stephenson Street and Sutton Street. A formal application to Ausnet has been forwarded for preliminary servicing advice.

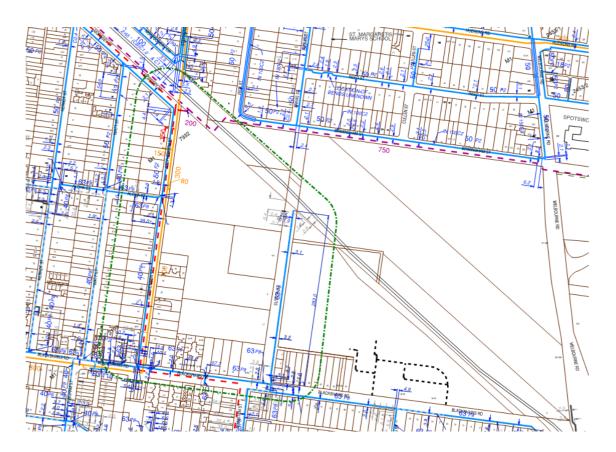


Figure 9: Gas Plan

7.00 ELECTRICITY

Jemena is the responsible authority for the distribution of electricity in this area.

There are existing overhead low voltage and high voltage infrastructure in Stephenson Street and Sutton Street frontages. The site is fed from two existing substations with underground cable easements connected to overhead poles in Sutton Street. There is also a pole mounted substation at the north end of Sutton Street which appears to be supplying the VicTrack site. The existing easements and substations within the site can be removed with demolition works. Two new substations spaced apart and located near the frontages of Stephenson Street and/or Sutton Street will be required. The electrical authority will determine when the substations will need to be installed. It is expected that the substation on Sutton Street can be installed in the proposed park. If the substation is installed in the design, appropriate measures shall be provided to ensure the substation does not impact on the allocated area of open space, amenity, connectivity or environmental capacity of the park to the satisfaction of council and the electrical authority.

The electrical demand of the proposed new site development works will exceed that of which can be provided by the existing overhead high voltage service cables. Two kiosk substations will be required on site to cater for the increased electrical demand. The kiosk substations will each require an easement reserve of 7200mm long x 7200mm wide and will need to be located on the Stephenson Street and/or Sutton Street frontages to avoid additional cable easements and costs. A Site Distribution Board will be required within 5000mm of the new kiosk substation location. A formal request to Jemena has been made for supply requirements and Jemena has responded advising the proposed redevelopment can be serviced from existing infrastructure.

As mentioned above the existing overhead electrical cables within Sutton Street will be relocated underground as part of the Sutton Street re-construction works. Formal applications to Jemena will be submitted when detailed documentation is ready prior to commencement.



Figure 10: Electrical Plan

8.00 TELECOMMUNICATIONS

Telstra has underground pit and pipe infrastructure within the street frontages to the site. The existing facilities lead in services are off Stephenson Street and Sutton Street.

It is anticipated that both new fibre and copper lead-in services will be required for the new development. Copper lines will be provided for the safety services with fibre lines for the data and telephony. It is expected for the lead in connections, services will be made available from the existing pit and pipe infrastructure located in Stephenson Street and Sutton Street.

An application will be submitted to the National Broadband Network (NBN) to determine if the site is eligible to received NBN Fibre. There are existing NBN assets within Blackshaws Road and it is likely that NBN or other broadband assets will be required for this development.



Figure 11: Telecommunications Plan

9.00 CONCLUSION

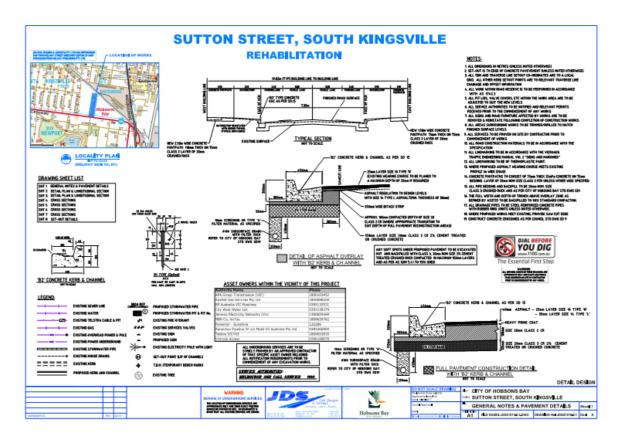
Our preliminary review and investigation of the existing services supply infrastructure network has indicated that the proposed development of the site known as Precinct 16 located at 41-59 Stephenson Street and 5-9A Sutton Street, South Kingsville can be adequately serviced from the existing infrastructure.

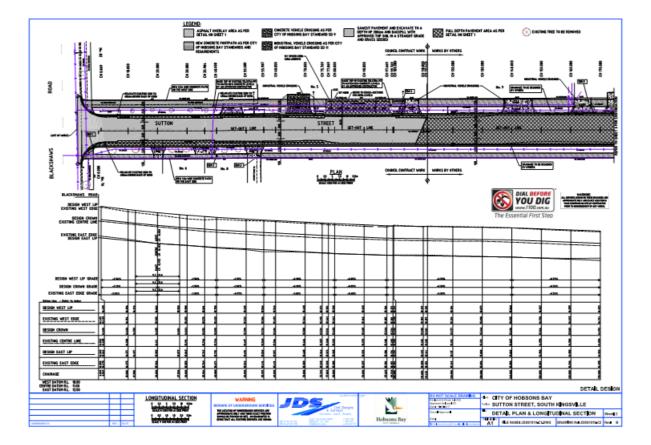
10.00 APPENDIX

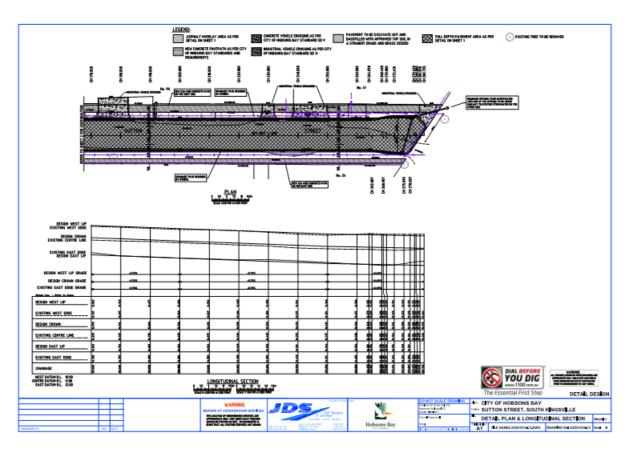
APPENDIX 1

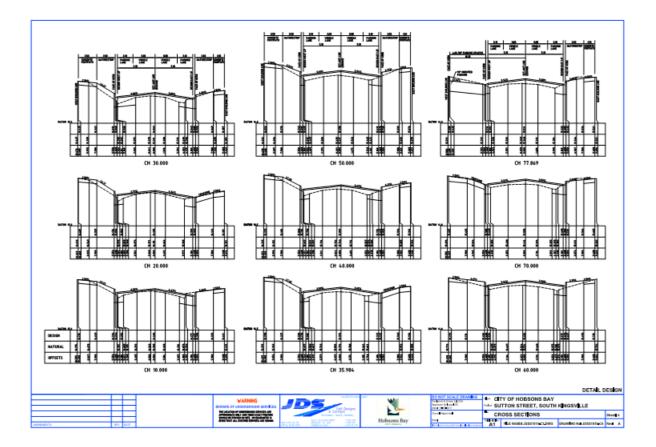
JDS COUNCIL PROPOSED SUTTON STREET REHABILITATION ROAD AND DRAINAGE WORKS.



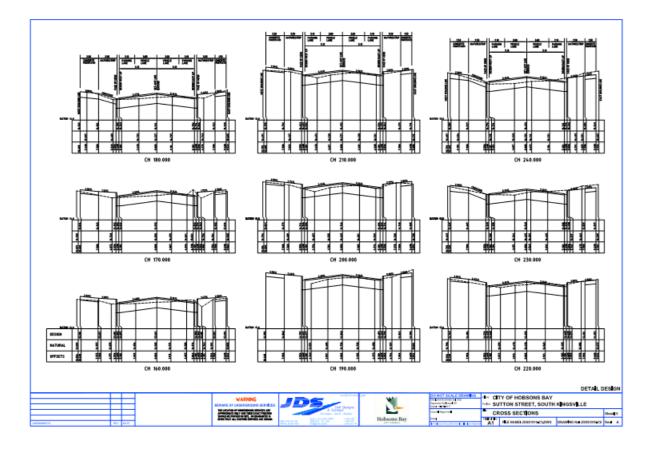


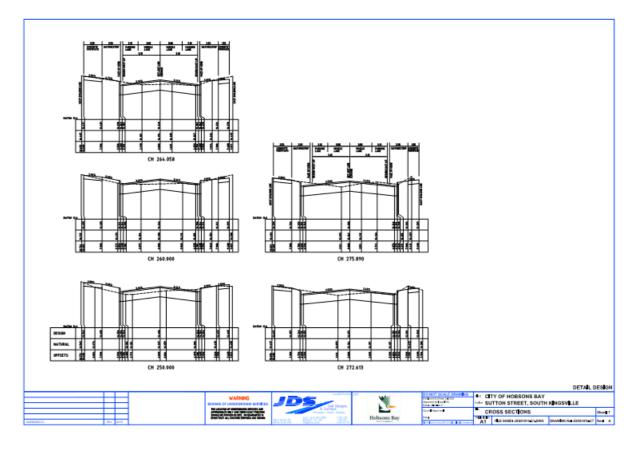




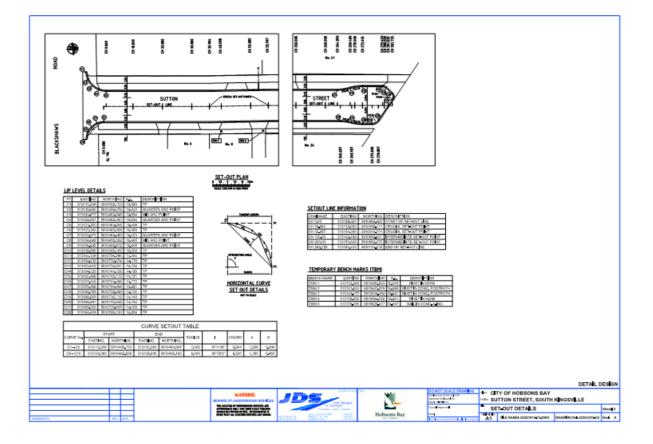


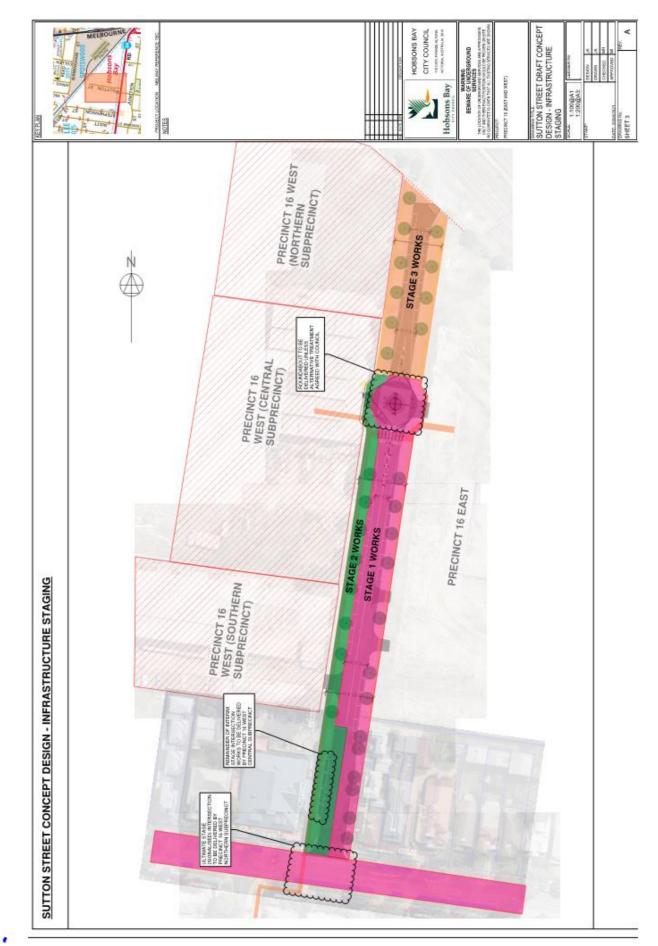






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41-59 Stephenson St & 5-9A Sutton St, South Kingsville Infrastructure & Developer Contributions Report, Version 7

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APPENDIX 2 MELBOURNE WATER FLOOD CERTIFICATE



25 November 2019

Alex Kilpatrick Metro Property Development 42 Barkly St St Kilda VIC 3182

Dear Alex,

Proposal: Flood level certificates Site location: 41-59 STEPHENSON STREET SOUTH KINGSVILLE 3015

Melbourne Water reference: MWA-1158592 Date referred: 22/11/2019

Applicable Flood Level:

Melbourne Water provides main drainage services to this property, consistent with the standards that applied at the time the Melbourne Water drainage system was constructed. In the event of a storm exceeding the design capacity of the drainage system, this property will be affected by overland flows. The estimated flood level for this property is 13.86 metres to Australian Height Datum (AHD), that has an Annual Exceedance Probability AEP, that is, a 1% probability of being equalled or exceeded in any one year.

A licensed surveyor should be engaged to determine the exact effect of the applicable flood level on the property.

Please note that whilst the above level is based upon a storm event, the property may be affected by more frequent flooding. To determine whether the property is affected by flooding from the local drainage system, please consult your local Council.

Important to note:

Melbourne Water provides flood advice under Section 202(2) of the Water Act 1989.

This letter does not constitute approval for any proposed development for planning or building.

To obtain flow rate velocity information or Melbourne Water's requirements for any proposed development, please contact our Customer Service Centre on 131 722 or make an application <u>here</u>.

The property may be affected by flooding from lesser and more frequent flood events or from the local drainage system. To determine if your property is affected by the local drainage system, please consult your local council.



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Melbourne Water ABN 81.945 386.953 990 La Trobe Street Docklands VIC 3008 PO Box 4342 Melbourne VIC 3001 Australia T 131.722 F +61.3.9679.7099 melbournewater.com.au The flood level advice provided is based on the most accurate information currently available. This estimated flood information may change and is valid for 3 months from the date of this letter. If you are proposing to develop this land after such time, it is recommended that new advice be obtained from Melbourne Water.

Disclaimer

This letter does not constitute approval for any proposed development for planning or building. Melbourne Water provides flood advice under Section 202(2) of the Water Act 1989.

This certificate provides information as a general reference source only and has taken all reasonable measures to ensure that the material in this letter is as accurate as possible at the time of publication. However, Melbourne Water makes no representation and gives no warranty about the accuracy, reliability, completeness or suitability for any particular purpose of the information. To the full extent that it is able to do so in law, Melbourne Water disclaims all liability, (including liability in negligence), for losses and damages, (including indirect and consequential loss and damage), caused by or arising from anyone using or relying on the information for any purpose whatsoever.

The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.

This estimated flood information may change and is valid for 3 months from the date of this letter. If you are proposing to develop this land after such time, it is recommended that new advice be obtained from Melbourne Water.

Advice

For more information in relation to flooding or additional services that Melbourne Water can provide please visit our <u>website</u>.

For general development enquiries contact our Customer Service Centre on 131722.

Regards,

Tristan Aldridge CSR

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APPENDIX 3

COST ESTIMATES – SUTTON STREET ROAD AND DRAINAGE WORKS INCL ROUNDABOUT

Sutton St - Preliminary Cost Estimate Scope of works - JDS Design issued by Council (Chainage 50 to 280) LD Eng Ref. 13600



								Sta	ige	2		e 3	
	Unit		Rate	Otv		Total					Otv		Total
1.0 General Items	liter on		10 000 00			10,000,00				10,000,00			10,000,0
1.1 Site Establishment	Item	s	10,000.00	1	s s	10,000.00		1	s s	10,000.00	1	s s	10,000.0
1.2 Site Management and Supervision including QA	Item					7,000.00		0.5		-			3,000.0
1.3 Provision for Traffic Management	Item	ş		1	ş	10,000.00		0.5	ş	5,000.00	1	ş	10,000.0
1.4 Provision for Pavement Testing	Item	ş	5,000.00	0.5	>	2,500.00			\$	-	0.5	\$	2,500.0
2.0 Excevation													
2.1 Excavate and dispose of material for road boxing	m3	\$	80.00	848.25	\$	67,860.00			\$	-	238	s	19,040.0
2.2 Remove and dispose of existing asphalt and kerb	m3	\$	100.00	488	\$	48,800.00			\$	-	0		
2.3 Rotamill existing asphalt Ch0-110	m2	\$	30.00	803	\$	24,090.00			\$	-	0		
3.0 Proposed Works													
Concrete													
3.1 New Concrete Footpath	m2	\$	80.00	217.5	\$	17,400.00		350	\$	28,000.00	340	\$	27,200.0
3.2 New concrete vehicle crossing	Item	\$	3,000.00	0				5	\$	15,000.00	3	\$	9,000.0
3.3 New B2 concrete Kerb and Channel	Im	\$	66.50	301.7	\$	20,063.05			\$		183.9	\$	12,229.3
3.4 Concrete works at roundabout	Item	\$	20,000.00	1	\$	20,000.00			\$		0	\$	
Pavement Allow for parking both sides - 10.1m wide pavement													
3.4 150mm Class 3 CTCR	m2	\$	22.35	409.5	\$	9,152.33			\$	-	476	\$	10,638.6
3.5 180mm Class 2 CTCR	m2	\$	29.05	409.5	\$	11,895.98			\$	-	476	\$	13,827.8
3.6 Asphalt - Base	m2	\$	28.50	1464.5	\$	41,738.25			\$	-	425	- 5	12,112.5
3.7 Asphalt Seal	m2	\$	18.85	1464.5	\$	27,605.83			\$	-	425	\$	8,011.2
3.8 Asphalt Wearing Course	m2	\$	28.50	1464.5	\$	41,738.25			\$	-	425	s	12,112.5
3.9 Allow for roundabout	No	\$	50,000.00	1	\$	50,000.00			\$	-	0	\$	-
Drainage													
3.7 Provide AG drain	Im	\$	65.00	301.7	\$	19,610.50			\$	-	183.9	s	11,953.5
3.8 Construct new SEP	Item	\$	4,000.00	2	\$	8,000.00			\$	-	6	Ś	24,000.0
3.9 New Drainage 450mm	Im	\$	500.00	335	\$	167,500.00					0	\$	-
3.1 Outfall connection to Melbourne Water Drain by other	Item		Excl										
4.0 Signs and line marking													
4.1 Line marking	Item	Ś	20,000.00	0.7	\$	14,000.00			\$		0.3	\$	6,000.0
4.2 New Signage	Item	\$	10,000.00	0.5	\$	5,000.00			\$		0.5	\$	5,000.0
									\$				
5.0 Other Items									\$	-			
5.1 Reinstate area with topsoil and seed	Item	\$	5,000.00	1	\$	5,000.00	\$	1.00	\$	5,000.00	1	\$	5,000.0
5.2 Feature Survey	Item	\$	15,000.00	1	\$	15,000.00			\$	-			
5.3 Service Proofing	Item	s	10,000.00	1	\$	10,000.00			\$	-			
5.4 Public Lighting under separate estimate	N/A	\$	-						\$	-			
5.5 Traffic Management	Item		12,500.00	1	\$	12,500.00			\$	-	1	- 5	12,500.0
5.6 Design and Contract Administration	Item	\$	96,000.00	0.8	\$	76,800.00			s	3,000.00	0.2	s	19,200.0
5.7 Adjustment of existing services	Allowance	\$	10,000.00	1	\$	10,000.00			\$	-			
Total					\$	753,254.18			\$	66,000.00		\$	233,325.5
Contingency, allow 30%					ŝ	225,976.25			\$	19,800.00		ŝ	69,997.0
Total Cost of Works					\$	979,230.43			\$	85,800.00		\$	303,323.1

Assumptions

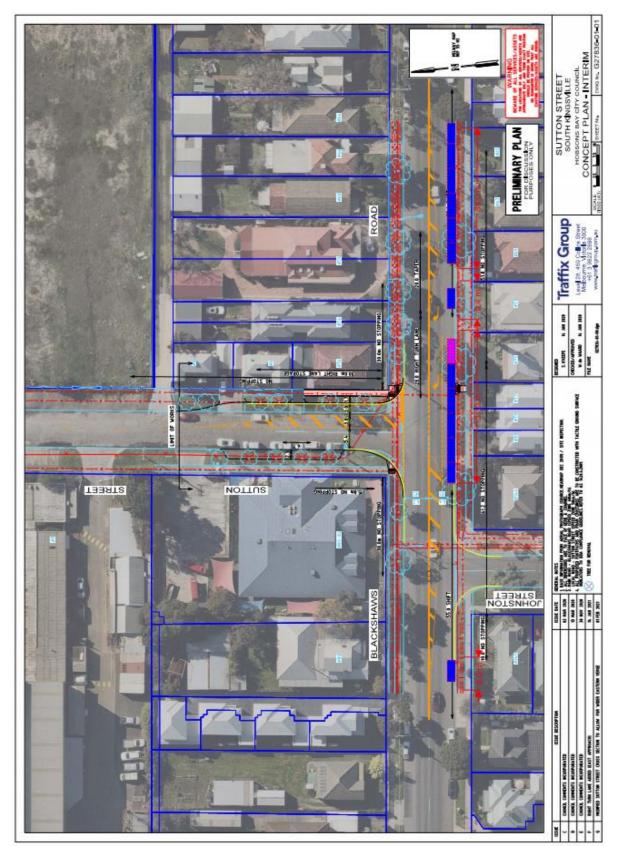
Vehicle crossings for new development sites covered by developers

Public lighting included in below ground powerline works

Upgrade of drainage network to 450mm dia to cater for existing overland flows subject to design.

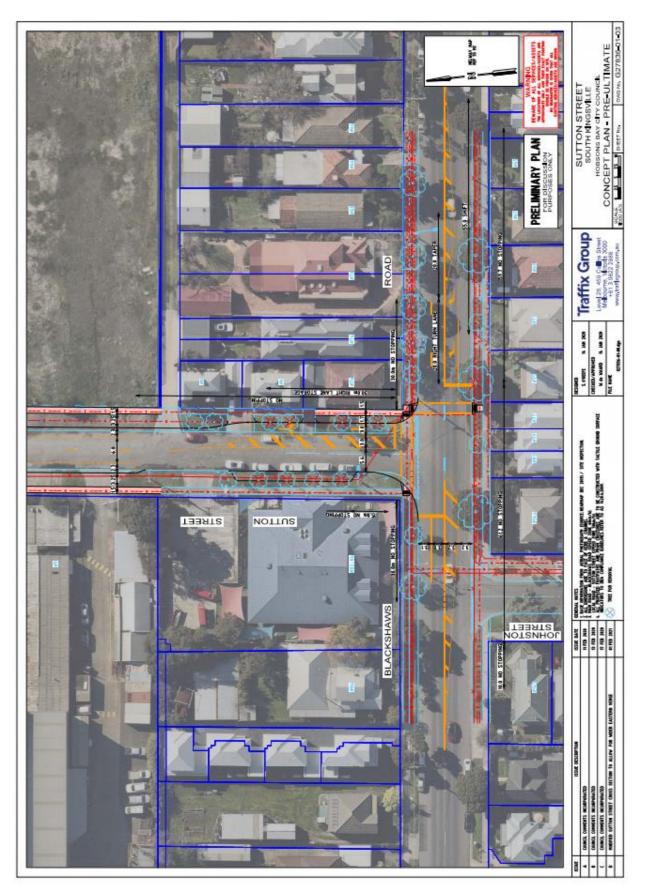
Sm wide asphalt road north of the roundabout

Roundabout to be constructed in Stage 1

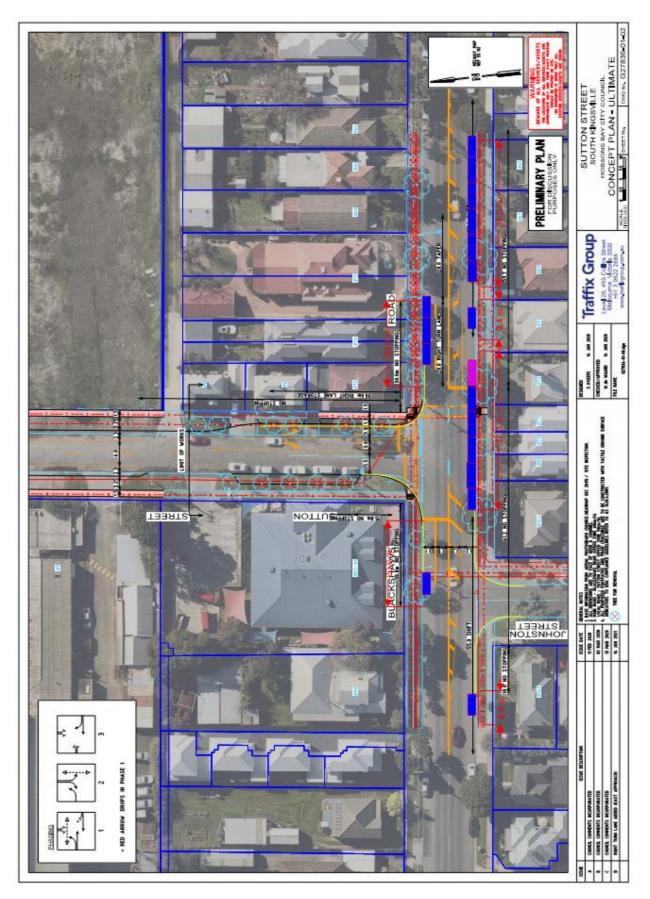


APPENDIX 4 SUTTON STEET AND BLACKSHAWS ROAD INTERSECTION DESIGNS

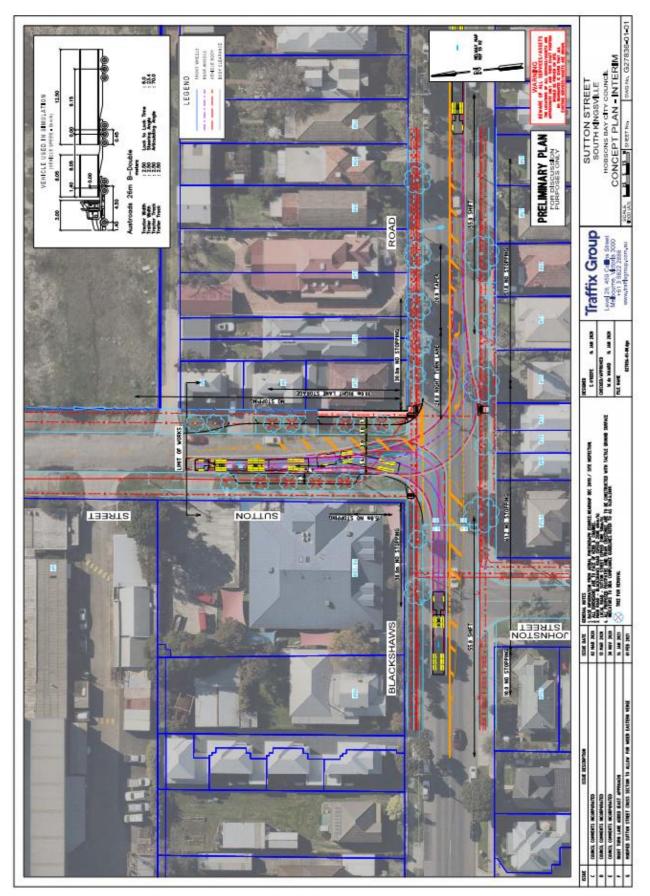
PLAN 1



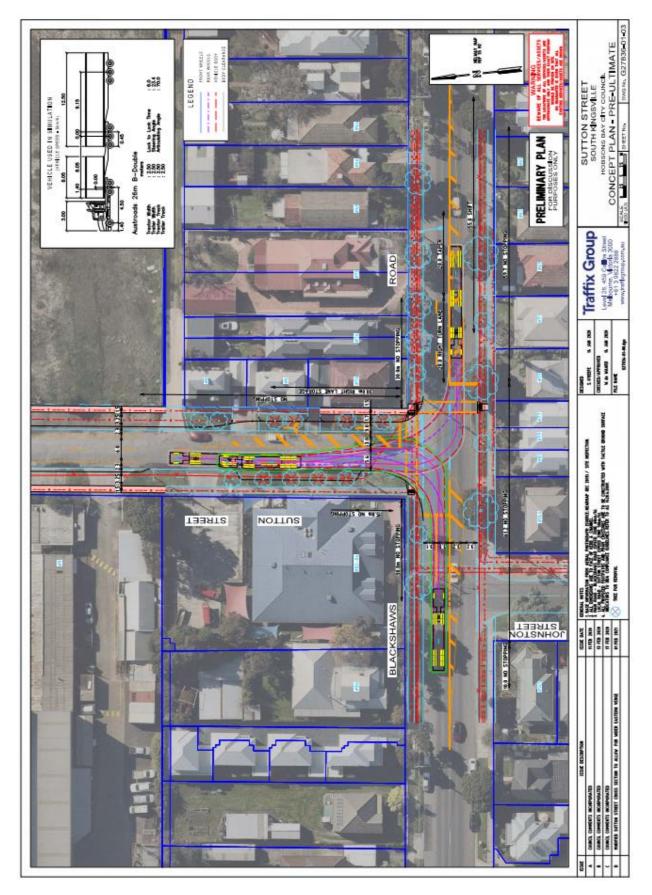
PLAN 2



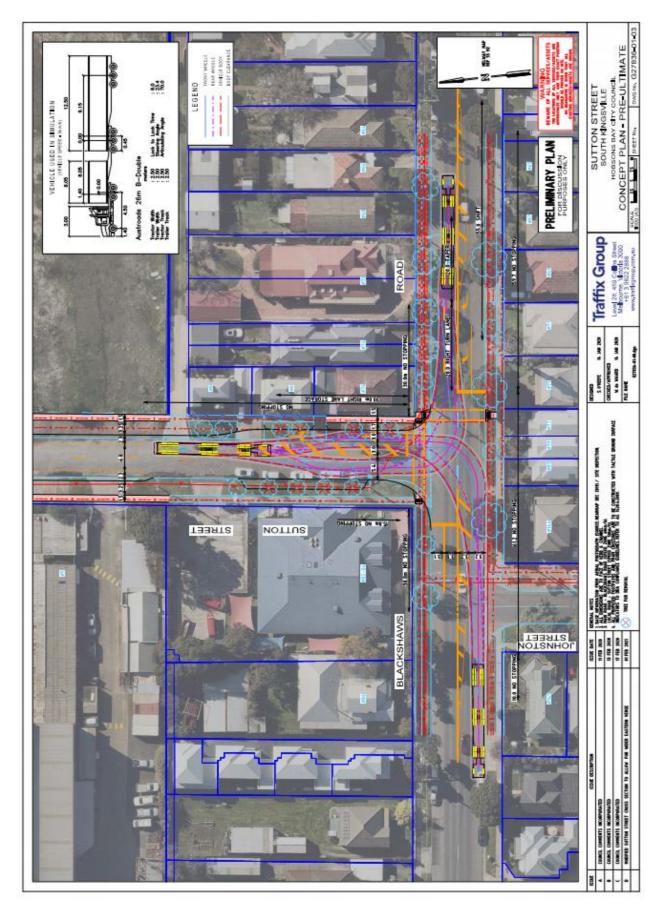
PLAN 3



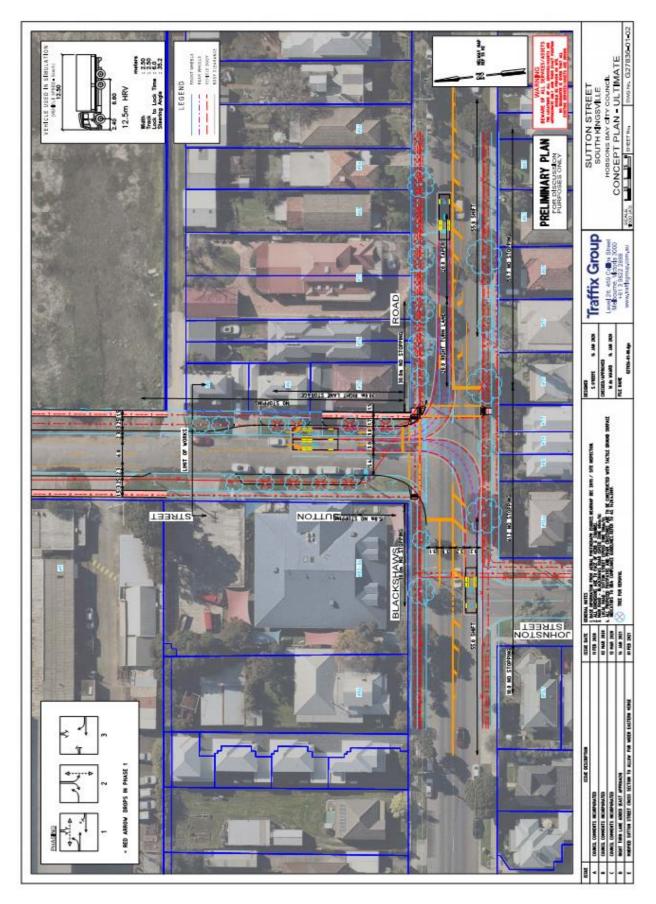
PLAN 4



PLAN 5



PLAN 6



PLAN 7

APPENDIX 5 COST ESTIMATES – SUTTON STREET AND BLACKSHAWS ROAD INTERSECTION -SIGNALISED INTERSECTION DESIGN



PRELIMINARY ESTIMATE/QUANTITIES

Location: Sutton Street and Blackshaws Road, South Kingsville

Project: Construction of Intersection Works (Interim) - Stage 1 (East)

		QUANTITY	UNIT		RATE	Ā	MOUNT	5	SUMMARY
	RAL ITEMS			_		_		\$	47,500.
1.1	SITE ESTABLISHMENT	1.0	Item	S	10,000.00	\$	10,000.00		
1.2	SITE MANAGEMENT & SUPERVISION INCLUDING QA	1.0	Item	Ś	10,000.00	\$	10,000.00		
1.3	PROVISION FOR TRAFFIC MANAGEMENT	15.0	Days	\$	1,500.00	\$	22,500.00		
1.4	PROVISION FOR PAVEMENT TESTING	1.0	Item	\$	5,000.00	S	5,000.00		
2.0 EXCA	VATION							\$	29,928.
2.1	REMOVE EXISTING KERB AND CHANNEL (CONCRETE AND	59.0	ln m	ŝ	60.00	S	3,540.00		
2.2	BLUESTONE) EXCAVATE AND DISPOSE OF MATERIAL	68.0	cu. m	s	80.00	S	5,440.00		
2.3	SAWCUT EXISTING PAVEMENT	57.3	In m	ŝ	10.00	ŝ	573.00		
2.4	REMOVE EXISTING CONCRETE FOOTPATH	9.5	sq. m	ŝ	50.00	ŝ	475.00		
2.5	REMOVE EASTING CONCRETE FOOTPATH REMOVAL OF EXISTING ASPHALT TO SUBGRADE	155.0	sq. m	ŝ	80.00	ŝ	12,400.00		
2.6	ROTOMILL EXISTING ASPHALT	1.0	Item	ŝ	7,500.00	Ş	7,500.00		
3.0 PROP	OSED WORKS							Ş	147,442
3.1	NEW CONCRETE FOOTPATH	39.3	sq.m	ŝ	80.00	S	3,144.00		
3.2	NEW CONCRETE VEHICLE CROSSOVER	14.5	sq.m	ŝ	120.00	S	1,740.00		
3.3	NEW 'B2' Type Concrete Kerb and Channel	58.4	In m	ŝ	120.00	ŝ	7,008.00		
PAVEMENT				÷		÷	.,		
3.4	FULL DEPTH ASPHALT PAVEMENT	102.0	sq.m	ŝ	325.00	ŝ	33,150.00		
3.5	REHABILITATE ASPHALT PAVEMENT	256.0	sq.m	\$	250.00	\$	64,000.00		
3.6	ASPHALT WEARING COURSE (APPROX 40mm)	328.0	sq.m	\$	35.00	\$	11,480.00		
DRAINAGE									
3.7	PROVIDE 'AG' DRAIN	58.4	In m	\$	50.00	S	2,920.00		
3.8	CONSTRUCT NEW 'SEP'	1.0	No.	\$	4,000.00	S	4,000.00		
3.9	NEW 375dia RRJCP	50.0	In m	\$	400.00	\$	20,000.00		
	S & LINEMARKING							ŝ	4.850
4.0 31614		1.0	Item	¢	4.000.00	S	4,000.00	Ŷ	4,000
4.2	REMOVE EXISTING SIGNS	2.0	Item	ş	50.00	S	100.00		
4.3	NEW SIGNS (Supply & install)	3.0	Item	Ś	250.00	s	750.00		
	•								
5.0 OTHE								\$	87,000
5.1	REMOVAL OF TREES	0.0	Item	Ş	2,000.00	Ş	-		
5.2	REINSTATE AREA WITH TOPSOIL AND SEED	1.0	Item	\$	2,000.00	S	2,000.00		
5.3	SERVICE PROVING (ALLOWANCE)	1.0	Item	\$	5,000.00	S	5,000.00		
5.4	SERVICE RELOCATION (ALLOWANCE)	1.0	Item	S	80,000.00	Ş	80,000.00		
OTAL								\$	316,720
6.0	PRELIMINARIES / DESIGN / ALTHORITY FEES (15%)							ŝ	47,508
0.0	The contract of the one of the other							•	47,000
7.0	CONTINGENCY (30%)							\$	95,016
	ICTION ESTIMATE							\$	459,240
CONSTRU								ş	409,240
6.0 7.0	, ,							s s s	

41-59 Stephenson St & 5-9A Sutton St, South Kingsville Infrastructure & Developer Contributions Report, Version 7



PRELIMINARY ESTIMATE/QUANTITIES

Location: Sutton Street and Blackshaws Road, South Kingsville

Project: Construction of Intersection Works (Interim) - Stage 1 (West)

1.0 GENE		QUANTITY	UNIT		RATE	A	MOUNT		SUMMAR
	RAL ITEMS				10.000.00	â	10.000.00	\$	40,000
1.1	SITE ESTABLISHMENT	1.0	Item	Ş	10,000.00	S S	10,000.00		
1.2	SITE MANAGEMENT & SUPERVISION INCLUDING QA PROVISION FOR TRAFFIC MANAGEMENT	10.0	ltem Days	\$ S	1.500.00	S	15,000.00		
1.3	PROVISION FOR TRAFFIC MANAGEMENT PROVISION FOR PAVEMENT TESTING	1.0	Item	s	5.000.00	ŝ	5.000.00		
1.9	PROVISION FOR PAVEMENT TESTING	1.0	Item	3	5,000.00	Ş	5,000.00		
2.0 EXCA	VATION							\$	15,422
2.1	REMOVE EXISTING KERB AND CHANNEL (CONCRETE AND BLUESTONE)	53.0	In m	ŝ	60.00	\$	3,180.00		
2.2	EXCAVATE AND DISPOSE OF MATERIAL	46.8	cu. m	ŝ	80.00	ŝ	3,744.00		
2.3	SAWCUT EXISTING PAVEMENT	57.3	In m	ŝ	10.00	ŝ	573.00		
2.4	REMOVE EXISTING CONCRETE FOOTPATH	8.5	sq. m	ŝ	50.00	ŝ	425.00		
2.5	ROTOMILL EXISTING ASPHALT	1.0	Item	ŝ	7.500.00	ŝ	7.500.00		
		1.2	144111	÷	1,000.000	Ŷ			
3.0 PROP	OSED WORKS							\$	95,208
3.1	NEW CONCRETE FOOTPATH	8.3	sg.m	ŝ	80.00	ŝ	664.00		
3.2	NEW 'B2' Type Concrete Kerb and Channel	53.6	In m	ŝ	120.00	ŝ	6.432.00		
3.3	NEW 'M2' Type Concrete Kerb and Channel	30.4	In m	ŝ	120.00	ŝ	3.648.00		
PAVEMEN				÷	180.00	÷	ajo 10100		
3.4	FULL DEPTH ASPHALT PAVEMENT	13.4	sq.m	ŝ	325.00	ŝ	4,355.00		
3.5	REHABILITATE ASPHALT PAVEMENT	256.0	sq.m	ŝ	250.00	S	64,000.00		
3.6	ASPHALT WEARING COURSE (APPROX 40mm)	269.4	sq.m	S	35.00	\$	9,429.00		
DRAINAGE									
3.7	PROVIDE 'AG' DRAIN	53.6	In m	\$	50.00	\$	2,680.00		
3.8	CONSTRUCT NEW 'SEP'	1.0	No.	ŝ	4,000.00	\$	4,000.00		
3.9	NEW 375dia RRJCP	0.0	In m	ŝ	400.00	ŝ			
	S & LINEMARKING							ŝ	3.000
4.0 31014	LINEMARKING	1.0	Item	ŝ	2.500.00	ŝ	2,500.00	ໍ	3,000
4.1	REMOVE EXISTING SIGNS	0.0	Item	S	50.00	ŝ			
		0.0				÷.	500.00		
4.1	NEW SIGNS (Supply & install)	2.0	ltern	ŝ	250.00	\$	500.00		
4.1 4.2 4.3	NEW SIGNS (Supply & install)		ltern	ŝ	250.00	Ş	500.00	l ¢	22.000
4.1 4.2	NEW SIGNS (Supply & install)	2.0		\$		ş		\$	33,000
4.1 4.2 4.3 5.0 OTHE	NEW SIGNS (Supply & install) R ITEMS REMOVAL OF TREES	2.0	ltem	-	2,000.00	_	8,000.00	\$	33,000
4.1 4.2 4.3 5.0 OTHE 5.1	NEW SIGNS (Supply & install)	2.0 4.0 1.0		ŝ		s		\$	33,000
4.1 4.2 4.3 5.0 OTHE 5.1 5.2	NEW SIGNS (Supply & install) R ITEMS REMOVAL OF TREES REINSTATE AREA WITH TOPSOIL AND SEED SERVICE PROVING (ALLOWANCE)	2.0	ltem ltem	\$ 50	2,000.00	\$	8,000.00	\$	33,000
4.1 4.2 4.3 5.0 OTHE 5.1 5.2 5.3 5.4	NEW SIGNS (Supply & install) R ITEMS REMOVAL OF TREES REINSTATE AREA WITH TOPSOIL AND SEED	2.0 4.0 1.0 1.0	ltem ltem ltem	S S S	2,000.00 2,000.00 3,000.00	0 0 0	8,000.00 2,000.00 3,000.00	\$	
4.1 4.2 4.3 5.0 OTHE 5.1 5.2 5.3 5.4	NEW SIGNS (Supply & install) R ITEMS REMOVAL OF TREES REINSTATE AREA WITH TOPSOIL AND SEED SERVICE PROVING (ALLOWANCE)	2.0 4.0 1.0 1.0	ltem ltem ltem	S S S	2,000.00 2,000.00 3,000.00	0 0 0	8,000.00 2,000.00 3,000.00	\$	33,000 186,630
4.1 4.2 4.3 5.0 OTHE 5.1 5.2 5.3	NEW SIGNS (Supply & install) R ITEMS REMOVAL OF TREES REINSTATE AREA WITH TOPSOIL AND SEED SERVICE PROVING (ALLOWANCE)	2.0 4.0 1.0 1.0	ltem ltem ltem	S S S	2,000.00 2,000.00 3,000.00	0 0 0	8,000.00 2,000.00 3,000.00		186,630
4.1 4.2 4.3 5.0 OTHE 5.1 5.2 5.3 5.4 OTAL	NEW SIGNS (Supply & install) IR ITEMS REMOVAL OF TREES REINSTATE AREA WITH TOPSOIL AND SEED SERVICE PROVING (ALLOWANCE) SERVICE RELOCATION (ALLOWANCE)	2.0 4.0 1.0 1.0	ltem ltem ltem	S S S	2,000.00 2,000.00 3,000.00	0 0 0	8,000.00 2,000.00 3,000.00	\$	
4.1 4.2 4.3 5.0 OTHE 5.1 5.2 5.3 5.4 OTAL 6.0 7.0	NEW SIGNS (Supply & install) RETEMS REMOVAL OF TREES REINSTATE AREA WITH TOPSOIL AND SEED SERVICE PROVING (ALLOWANCE) SERVICE RELOCATION (ALLOWANCE) PRELIMINARIES / DESIGN / AUTHORITY FEES (15%)	2.0 4.0 1.0 1.0	ltem ltem ltem	S S S	2,000.00 2,000.00 3,000.00	0 0 0	8,000.00 2,000.00 3,000.00	\$	186,630 27,99

NOTES:

1 Based on Concept Layout Plan Dwg No. G27836 (Issue G) Subject to Council approval

2 Estimate for preliminary purposes only

3 Unit rates may vary



Traffix Group

27836 - PRELIMINARY ESTIMATE/QUANTITIES

ocation: Sutton Street and Blackshaws Road, South Kingsville

roject: Installation of Signalised Intersection and Associated Works (Ultimate) - Stage 2

		QUANTITY	UNIT		RATE	A	MOUNT		SUMMARY
	RALITEMS					_		\$	52,500.0
1.1	SITE ESTABLISHMENT	1.0	Item	_	10,000.00	_	10,000.00		
1.2	SITE MANAGEMENT & SUPERVISION INCLUDING QA	1.0	Item	ŝ	5,000.00	_	5,000.00		
1.3	PROVISION FOR TRAFFIC MANAGEMENT	25.0	Days	Ş	1,500.00	\$	37,500.00		
0 EXCA	VATION							\$	10,000.0
2.1	ROTOMILL EXISTING ASPHALT	1.0	Item	\$	10,000.00	\$	10,000.00		
0 PROP	OSED WORKS							\$	61,040.0
VEMEN	-							ľ	
3.1	RESHEET OF SKID RESISTANT ASPHALT PAVEMENT (APPROX 40mm)	1744.0	sq.m	ŝ	35.00	\$	61,040.00		
	40.111)		· · · · ·	-					
0 PROP	OSED SIGNAL WORKS							\$	244,770.0
4.1	NEW PEDESTAL FOUNDATION - 0.7m BASE	8.0	Itern	S	1,500.00	_	12,000.00		
4.2	NEW 2B TYPE PEDESTALS	7.0	Item	s	3,500.00	_	24,500.00		
4.3	NEW TYPE 3 PEDESTAL	1.0	Item	\$	3,500.00		3,500.00		
4.4	3 ASPECT LANTERNS (LED)	3.0	Item	Ş	1,600.00		4,800.00		
4.5	5 ASPECT LANTERNS (LED)	6.0	Item	Ş	3,000.00	\$	18,000.00		
4.6	PEDESTRIAN LANTERNS	4.0	Item	ŝ	665.00	ŝ	2,660.00		
4.7	AUDIO TACTILES - VARIABLE	4.0	Item	ŝ	1,980.00	\$	7,600.00		
4.8	DETECTOR LOOPS - STANDARD (VEHICLE)	6.0	Item	\$	1,080.00	\$	6,000.00		
4.9	SUPLLY AND INSTALL DETECTOR PIT	3.0	Item	ŝ	1,000.00	\$	3,000.00		
4.10	CONDUIT PIT	6.D	Item	ŝ	1,600.00	ŝ	9,600.00		
4.11	CONDUIT - OPEN TRENCH (GRASS/UNPAVED) & INSTALL 1/50	3.0	In.m	s	180.00	ŝ	540.00		
4.12	CONDUIT - OPEN TRENCH (GRASS/UNPAVED) & INSTALL 1/63	3.0	In.m	ŝ	180.00	ŝ	540.00		
4.13	CONDUIT - OPEN TRENCH (GRASS/UNPAVED) & INSTALL 1/20	3.0	In.m	ŝ	170.00	ŝ	510.00		
4.14	CONDUIT - OPEN TRENCH (GRASS/UNPAVED) & INSTALL 2/100	47.0	ln.m	\$	310.00	ŝ	14,570.00		
4,15	CONDUIT - BORE UNDER ROAD & INSTALL 2/100	18.0	In.m	\$	480.00	ŝ	7,200.00		
4.16	SUPPLY AND INSTALL CABLE FOR SITE	74.0	In.m	\$	125.00	\$	9,250.00		
4.17	NEW CONTROLLER BASE	1.0	Item	ŝ	2,900.00	ŝ	2,900.00		
4.18	NEW CONTROLLER -TRAFFIC SIGNALS	1.0	Item	S	22,000.00	ŝ	22,000.00		
4.19	POINT OF SUPPLY	1.0	Item	ŝ	2,900.00	ŝ	2,900.00		
4.20	SCATS CONNECTION	1.0	Item	\$	4,000.00	_	4,000.00		
4.21	REPROGRAM TRAFFIC SIGNALS - STANDARD	1.0	Item	ŝ	5,700.00	ŝ	5,700.00		
4.22	TRAFFIC SIGNAL MAINTAINENCE (10YEARS)	1.0	Item	ŝ	75,000.00	ŝ	75,000.00		
4.23	REINSTATEMENT WORKS (ALLOWANCE	1.0	Item	ŝ	8,000.00		8.000.00		





G27836 - PRELIMINARY ESTIMATE/QUANTITIES

Location: Sutton Street and Blackshaws Road, South Kingsville

Project: Installation of Signalised Intersection and Associated Works

		QUANTITY	UNIT		RATE	A	AMOUNT		SUMMARY
5.0 SIGNS	& LINEMARKING							\$	11,250.00
5.1	LINEMARKING	1.0	Item	\$	10,000.00	ŝ	10,000.00		
5.2	NEW SIGNS (Supply & install)	5.0	Item	\$	250.00	\$	1,250.00		
6.0 OTHE	RITEMS							\$	64,000.00
6.1	STREET LIGHTING (ALLOWANCE)	1.0	Item	\$	60,000.00	ŝ	60,000.00		
6.2	SERVICE PROVING (ALLOWANCE)	1.0	Item	S	4,000.00	\$3	4,000.00		
OTAL								\$	443,560.00
7.0	PRELIMINARIES / DESIGN / AUTHORITY FEES (15%)							\$ \$	443,560.00 66,534.00
	PRELIMINARIES / DESIGN / AUTHORITY FEES (15%) CONTINGENCY (30%)							Ť	
8.0								\$	66,534.00

NOTES:

- 1 Based on Concept Layout Plan Dwg No. G27836 (Issue D) Subject to Council approval
- 2 Estimate for preliminary purposes only
- 8 Unit rates may vary

DATE: 13 March 2020



THE O'NEILL GROUP

APPENDIX 6 COST ESTIMATE - SUTTON STREET UNDERGROUND POWER WORKS

7991 / Deservents / Project Documentation / Cost Estimate for Undergrounding of Powerlines

80

Project No. 7991

19 February 2021

Metro Property Development Level 4 484 St Kilda Road Melbourne VIC 3004

Attention: Alex Kilpatrick Senior Development Manager

SENT VIA EMAIL alex.kipatrick@metroprop.com.au

Dear Alex,

Cost Estimate for Undergrounding of Powerlines 41-59 Stephenson Street & 5-9A Sutton Street, South Kingsville

We are the engineering consultancy engaged to undertake the provision of utility services to the above development site. We understand that you require a budget cost estimate for the undergrounding of both the high and low voltage cables on Sutton Street for an extent of approximately 290m.

The power authority for this area is Jemena. We have recently received a firm offer from the same power authority for another project in Keilor Road, Essendon. This project included the undergrounding of approximately 200m of high and low voltage cables. The developer contribution for this project, which is similar in scope was \$461,000. This equates to a linear meter rate of \$2,305/m.

A range of \$2,000-\$2,500/m is typically the order of magnitude for developer contribution when undergrounding both high and low voltage cables. However, there are a large variety of factors which can significantly increase or decrease the developer contribution for powerline alteration projects including soil contamination, presence of rock, traffic management, pole mounted substations, etc.

Based on the above, we would estimate to underground 290m of high and low voltage cables along Sutton Street would be in the vicinity of \$580,000 - \$725,000.

The relocation of overhead powerlines to underground will not affect the capacity of electrical power supply provisions to any affected properties including 5 Sutton Street.

Yours faithfully, THE O'NEILL GROUP

David O'Flaherty Director



CONSULTING ENGINEERS

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Managing Sirector And rew Charalembous

Directors Angele Simonette David O'Flaherty

Principal Consulting

Strontural

Chill

Mechanical

Electrical

Hydraulica

Fire Protection

Ult



APPENDIX 7 PRECINCT 16 WEST INFRASTRUCTURE DELIVERY AND APPORTIONMENT STRATEGY

Precinct 16 West Infrastructure Delivery and

Apportionment Strategy

- Hobsons Bay City Council

19 April 2021

Precinct 16 West Infrastructure Delivery and

Apportionment Strategy

- Hobsons Bay City Council

19 April 2021

Client	Hobsons Bay City Council
Project	Precinct 16 West Infrastructure Delivery and Apportionment Strategy
Version	3.0
Prepared By	Laura Caccamo and Chris De Silva
Date	19 April 2021

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7. Summary + Recommendations	. 9

1. INTRODUCTION

Hobsons Bay City Council engaged Mesh Planning to prepare an *infrastructure apportionment and delivery strategy* for the area known as Precinct 16 West which contains three development parcels (*see Figure 1*).

We understand two of the three parcels, are subject of development proposals that have been prepared in accordance with the Framework Plan. The southern parcel has not been subject of a development proposal and is not expected to be developed in the near future.

Although Mesh's brief was limited to Precinct 16 West, through discussions with Council and the proponents, it has become apparent that Precinct 16 East (see *Figure 1*) must be considered when determining a suitable and equitable infrastructure strategy for Precinct 16 West. A number of factors have driven Mesh to include this area in the infrastructure apportionment and delivery strategy, including:

- > existing Section 173 Agreement for Precinct 16 East; and
- > common infrastructure items to be funded and delivered by both Precinct 16 East and West.

It should be noted that whilst Precinct 16 East has been included in preparation of the plan, given that the s173 Agreement that relates to the eastern parcel has been signed and executed, the contributions to be gathered from the eastern parcel have been incorporated into the preferred option.

Mesh in collaboration with Council developed and tested a number of options in preparing this infrastructure delivery strategy. The preferred option that is set out in this report is considered to be the most practical and equitable option.

This report sets out the following:

- > Adopted methodology;
- > Key findings;
- > An infrastructure delivery approach;
- > Recommendations.

2. PROJECT METHODOLOGY

The process of identifying an equitable and deliverable strategy for infrastructure provision has:

- > Defined the contributing/benefitting catchment which is the 4 properties identified in *Figure* 1.
- > Undertaken an analysis based on total site area as the preferred cost apportionment methodology.
- > Considered the existing s173 agreement for Precinct 16 East.
- > Taken into account likely or known project staging.

> Attempted to promote efficient and timely infrastructure provision to meet infrastructure needs that will be triggered by development.



Figure 1 - Context



3. INFRASTRUCTURE PROJECTS

The following infrastructure projects and associated costs were provided by Council and were not subject of third party peer review as part of preparation of this infrastructure apportionment and delivery strategy. The staged delivery of Sutton Street was agreed between Council and the proponents. Mesh considers this staged approach to be logical and efficient from a practical delivery perspective.

Table	1	Infrastructure	Projects	and	Costs
rabic		minastructure	1 10/0013	ana	00313

Project ID	Project	Catchment	Cost
1	Sutton Street Upgrade (including drainage + roundabout)	West/ East	\$1,368,353.43
1.1	Stage 1 Sutton Street Upgrade (incl. drainage and roundabout)*	West/ East	\$979,230.43
1.2	Stage 2 Sutton Street Upgrade (incl. drainage)*	West/ East	\$85,800.00
1.3	Stage 3 Sutton Street Upgrade (incl. drainage)*	West/ East	\$303,323.00
2	Powerlines underground (along Sutton Street)	West	\$750,000
3	Interim intersection upgrade (Sutton Street/Blackshaws Road)	West/ East	\$729,850
4	Ultimate intersection upgrade with signalisation (Sutton Street/Blackshaws Road)	West/East	\$643,160
5	Pedestrian crossing	East	\$200,000

*see Figure 2 following



4 41-59 STEPHENSONS ST & 5-9A SUTTON ST STH KINGSVILLE INFRASTRUCTURE & DEVELOPER CONRIBUTIONS REPORT

4. APPORTIONMENT

When determining a suitable cost apportionment methodology for this infrastructure delivery strategy, Mesh considered the status of each parcel, and had regard to how resolved each parcel was in terms of anticipated development outcomes i.e. likely yield. A number of cost apportionment options were contemplated for this site and they are outlined below:

- Yield

The Framework Plan that applies to the precinct seeks to achieve a co-ordinated medium/high density residential outcome for each landholding. In higher density development contexts, yield tends to be a commonly used cost apportionment methodology.

However, yield was not adopted for the precinct as the southern landowner is not intending to develop in the short term. As such the landowner does not have plans that demonstrate a potential development outcome for the site. Given the range of potential yield outcomes that could be achieved under the planning provisions, it was considered inappropriate to assume a yield outcome for the land.

Net Developable Area

Adoption of the net developable area of each parcel as the basis for cost apportionment was also considered. The uncertainty regarding development outcomes and developable area was also a rationale for not using Net Developable Area (NDA) as the basis for apportioning costs, as this would not result in equity of contributions across the parcels. Further, the uncertainty associated with development outcomes for the southern parcel meant this option was not tested.

- Total Site Area

Council officers advised that 'total site area' was a cost apportionment option that had been discussed among the landowners and there was a consensus that this was a preferred apportionment methodology given the southern landowner was yet to prepare a development plan.

The landowners acknowledged the uncertainty associated with the development outcomes for the southern parcel and recognised that using yield and NDA calculations from the other parcels was not 'fixed' and subject to change, therefore resulting in potential for an inequitable outcome.

Consequently, 'total site area' was considered to be the most appropriate cost apportionment methodology suitable for Precinct 16 West and has therefore underpinned the infrastructure delivery strategy set out in this report.

5. COST APPORTIONMENT CALCULATION METHOD

To inform the infrastructure delivery strategy set out in Section 6, it was important to understand the theoretical cash liability of each parcel if the project costs were equally apportioned based on total site area, and if each land parcel were making a monetary contribution.

Table 2 sets out a schedule of the infrastructure projects and their costs and provides a breakdown of charges pe hectare if the projects were apportioned against the total site area of either Precinct 16 West or East.

Table 2 incorporates the existing s173 agreement from Precinct 16 East. Precinct 16 East contains an existing Planning Permit and corresponding s173 agreement, however, it is understood the requirements of this agreement have not yet been delivered.

It was important to ensure that the infrastructure funding and delivery of obligations of Precinct 16 East were recognised and accounted for in this broader infrastructure plan, particularly as the upgrading of Sutton Street is to be funded by both Precinct 16 East and West.

The existing s173 agreement obligations are summarised as follows:

> \$200k for a signalised pedestrian crossing at the western end of Precinct 16 East on Blackshaws Road (total project cost undefined)

> \$100k towards the full signalisation of the intersection of Sutton Street/ Blackshaws Road

> 46% of the cost to upgrade the whole length of Sutton Street (from Blackshaws Road intersection to the railway reserve)

The above requirements are incorporated into Table 2.

Table 2 – Cost Apportionment - Total Site Area

Project ID	Project Description	Total Estimated Cost of Project	Catchment	Indicative Provision Trigger	Total Site Area	Charge per Ha	Total	Apportionment
1_1	Sutton Street Upgrade (incl. drainage) 54%	\$738,910.85	West	Pays for remainder of 54%	5.05	\$146,318.98	\$738,910.85	100%
1_2	Sutton Street Upgrade (incl. drainage) 46%	\$629,442.58	East	East S173 agreement 46%	4.56	\$138,035.65	\$629,442.58	100%
2	Powerlines Underground	\$750,000.00	West	Upgrade of Sutton Street	5.05	\$148,514.85	\$750,000.00	100%
3_1	Interim Intersection Upgrade (Left & Right Turn Lanes)	\$459,240.00	East	Excluded	4.56	\$100,710.53	\$459,240.00	100%
3_2	Interim Intersection Upgrade (Western side of Sutton)	\$270,610.00	West	Upgrade of Sutton Street	5.05	\$53,586.14	\$270,610.00	100%
4_1	Ultimate intersection upgrade with signalisation	\$543,160.00	West	150 th lot within any stage of development	5.05	\$107,556.44	\$543,160.00	100%
4_2	Ultimate intersection upgrade with signalisation	\$100,000.00	East	East S173 agreement	4.56	\$21,929.82	\$100,000.00	100%
5	Pedestrian crossing	\$200,000.00	East	East S173 agreement	4.56	\$43,859.65	\$200,000.00	100%
Total		\$3,232,123.43			9.61		\$3,232,123.43	100%

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The charges in Table 2 produce the following property based contributions:

Table 3 Parcel contributions

Parcels	Charge per ha	Total contributions payable
Precinct 16 East	\$203,825.13	\$929,442.58
Precinct 16 West – Northern Parcel	\$455,976.41	\$989,468.80
Precinct 16 West – Central Parcel	\$455,976.41	\$948,430.93
Precinct 16 West – Southern Parcel	\$455,976.41	\$364,781.13
Total		\$3,232,123.43

Table 2 has been used as the basis for identification of the infrastructure delivery strategy below.

The infrastructure delivery strategy attempts to 'match' projects to parcels to ensure Council has a basis to seek works in kind as the preferred outcome in the majority of cases. This approach is recommended to avoid Council having to act as the collection agency (for collection of the funds) and delivery agency (for delivery of the works).



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6. INFRASTRUCTURE DELIVERY STRATEGY

Table 4 extrapolates Table 2 and 3 into a practical infrastructure delivery strategy, having regard to land ownership, development readiness and apportionment of costs.

Table 4 - Implementation Strategy

Parcels	Cash Liability based on Scenario 2 (land area)	Project Delivery Responsibility	Cash	Cash Contribution value (\$)	Actual WIK delivery value (\$)	Difference between cash liability and actual WIK delivery	Comments
Precinct 16 East	\$929,442.58	 Stage 1 Sutton Street upgrade (incl. drainage and roundabout) Part of interim intersection works (not included in calcs) 	 \$100k towards signalisation of Sutton Street/Blackshaws Road intersection \$200k towards pedestrian crossing 	\$300,000.00	\$979,230.43	-\$349,787.85	Landowner will pay \$200k to Council for pedestrian crossing \$100k will go to the Northern parcel to contribute to cost of ultimate intersection
							A reimbursement of \$349k is required as this parcel is delivering more than 46% of Sutton Street.
Precinct 16 West – Northern Parcel	\$989,468.80	 Stage 3 of Sutton Street upgrade (incl. drainage) Ultimate intersection upgrade with signalisation 			\$946,483.00	\$42,985.80	Under contributing and must pay \$42,985.80 difference in cash to Council
Precinct 16 West – Central Parcel	\$948,430.93	 Stage 2 of Sutton Street upgrade (incl. drainage) Underground Powerlines Interim intersection (works) 			\$1,106,410.00	-\$157,979.07	Cash reimbursement required for over contributing
Precinct 16 West – Southern Parcel	\$364,781.13		 Cash contribution 	\$364,781.13			Cash contribution will pay for the over contributors
	\$3,232,123.43			\$664,781.13	\$3,032,123.43	-\$464,781.13	



The infrastructure delivery strategy takes into consideration the existing s173 agreement for Precinct 16 East and the shared infrastructure requirements for Precinct 16 West.

In summary, Council is receiving contributions to the value of \$3M as works-in-kind projects and \$664k in cash and Council is required to reimburse \$464k between Precinct 16 East and the central parcel. The \$200k difference is for Council to deliver the pedestrian crossing.

Under their existing s173 agreement, Precinct 16 East are obligated to

- Provide 46% of the cost to upgrade the whole length of Sutton Street (from Blackshaws Road intersection to the railway reserve)
- Make a financial contribution of \$100k towards signalisation of intersection of Sutton St/ Blackshaws Road
- Make a financial contribution of \$200k towards a signalised pedestrian crossing.

Notwithstanding the above, a key objective of this process was to ensure Sutton Street could be delivered in the most logical and practical manner possible. Following a number of meetings between Council and the proponents, the following staged delivery of Sutton Street was agreed which would see Precinct 16 East, the northern parcel and central parcel deliver Sutton Street in three stages, as opposed to trying to determine how Precinct 16 East would deliver 46% of Sutton Street. This approach however will see Precinct 16 East deliver more than 46% of Sutton Street.

7. SUMMARY + RECOMMENDATIONS

Overall, the infrastructure delivery strategy identified in Table 4 is considered to be a practical and equitable approach toward the delivery responsibilities of each land parcel, having regard to the location and status of each parcel.

An infrastructure liability can be discharged in two ways, Council can accept cash contributions on a progressive development basis and become the delivery agent. Or as set out in Table 4, Council can specify a preference for Works in Kind and have this formalised via a s173 agreement with any cash balance paid to Council. This approach provides a basis to identifying project responsibility having regard to each land parcel's in theory liability. This approach is recommended by Mesh.

Moving forward, Mesh recommends the following:

> Council to consider the recommended infrastructure delivery strategy and explain the preferred approach to the landowners;

> Council to identify and formalise provision triggers for each project in consultation with the landowners

(it is understood provision triggers have been proposed); and

> Formalise the preferred approach in s173 Agreements.



Figure 2 Sutton Street - Staged Delivery

- Central sub precinct
- . Stage 2 Sutton Street upgrade (incl. drainage)
- Interim intersection upgrade (excluding works by P16E)
 Underground Powerlines Proposed Trigger: Stage 2

- Northern sub precinct

- Stage 3 Sutton Street upgrade (incl. drainage) Proposed Trigger: Stage 3
 Ultimate intersection upgrade (signals) Proposed Trigger: 150^m lot

Precinct 16 East

- Works to deliver left and right turn Works to deliver left and right turn lane (east part of interim intersection)
 Trigger: Stage 1
 Stage 1 Sutton Street upgrade (incl. drainage and roundabout)
 Trigger: Stage 3
 \$100k towards signalisation of Sutton Street/Blackshaws Road intersection

- intersection
 S200k towards pedestrian crossing
 Trigger: Final stage



