Final Submission 2, Sharon Laura, 26th September 2018

Westconnex M4-5 Link: Mainline Tunnel, Modification report

The proponent has made a number of improvements to their proposal, which benefits some residents, but shifts and increases the burden onto others, many of who have already been subjected to intolerable round the clock construction.

However, the Modification report makes assumptions that all problems have been dealt with in the M4-M5 Link EIS, SPIR and CoA, which ignores the lived reality and experience of Haberfield/Ashfield residents. Many legitimate concerns and issues raised in response to the initial M4-M5 EIS have been ignored and still require response and address.

The purpose of this submission is, that with the use of data from the proponent's own documents, to highlight the significant impact of the Modification upon the Haberfield/Ashfield community. There are also constructive suggestions made about mitigation and remedy measures that could address aspects of this problem, and provide some relief.

1 Proposed Northcote Civil & Tunnelling site

The proposal is for a 24 hour/ 7 day per week tunnelling and spoil removal site, with 2 spoil removal routes. The proponents argue that this can operate within current conditions of approval (CoA). However this, following on from M4 East operations, will impose additional fatigue and burden on surrounding residents - and new burden on residents in Canada Bay Local Government Area.

The experience of the 24/7 M4 East tunnelling and spoil removal operations from current Northcote St site, all reportedly operating within the current CoA, demonstrates the noise & vibration intrusion and burden was far more extensive than "estimated".

The proposed Northcote St civil and tunnel site will be operating adjacent to the proposed Wattle St civil and tunnel site, so the cumulative local spoil removal impact will increase by 181% from 0.311 million cubic metres to 0.877 million cubic metres. (***Table 6-44****, p 6-86, section6.5.6, M4-M5 Link Mainline Tunnel Modification report*). This exceeds the 0.821 million cubic metres of spoil moved from the M4E Northcote, Eastern Ventilation and Walker (PRVF), & Wattle St sites (C7, C8 & C9) (***Table 6-24****, p 6-55, Section 6.9, M4 East EIS, Vol 1A*). It is equivalent to the 0.893 million cubic metres of spoil removed from Haberfield/Ashfield for the M4 East project.

- **The Department of Planning should impose additional conditions of approval which limit heavy truck movements overnight and require a curfew from 10pm until 6am. Also all spoil laden truck movements should be via the new M4 East tunnel, rather than with an option of surface lane travel along Wattle St and Parramatta Rd, (as is proposed) even when the G loop route is undertaken.**

I note that the original proposal to conduct all spoil removal direct from the mainline tunnelling project into the M4 East tunnels has not been given any analysis in this modification.

The M4-M5 EIS (Chapter 6, p6-41) describes proposed spoil removal from Haberfield 2a site:

Tunnel spoil would be stockpiled within the M4 East stub tunnels. Trucks would enter the eastbound stub tunnel from the M4 East mainline tunnels, be loaded with spoil, and exit to the westbound M4 East mainline tunnels. No tunnel spoil would be removed to the surface via the Haberfield civil and tunnel site – all spoil would be transported below ground via the M4 East mainline tunnels. Details

Why has this proposal been dropped from consideration? It is a proposal that would significantly reduce the surface traffic congestion and impact on local residents.

The technical requirements may be a challenge, but if undertaken would reduce the burden on local communities, already subjected to a complex and intrusive process that has gone on for nearly five years. A full analysis of this original spoil haulage proposal option should be provided.

- **The Department of Planning should request that the proponent address the issue on the feasibility of conducting all spoil removal from the mainline tunnels in Haberfield direct into the M4 East tunnels.**

2 Parramatta Road East & West civil sites

While it is now proposed to not have any tunnelling or spoil storage or removal from this site, it is still proposed to operate this site on a 24/7 basis. The proponent argues that there is no requirement to undertake analysis under conditions C20 & 21, because it proposes to operate these sites under already approved conditions. However the full impact of a 24/7 operation, on top of M4 East construction, again places local residents with an additional fatigue burden. This is not satisfactorily addressed in the proposal.

- **The Department of Planning should place tighter conditions of approval on planned after hour activities at these sites and specifically impose a curfew on any heavy vehicle loading and unloading between 10pm and 6 am.**

3 Proposed Parramatta Rd aerial pedestrian walkway

This walk way should be designed in such a way that the public can also make use of it. It would be safer for local school children and local residents to avoid heavy vehicle traffic, entering and exiting the Parramatta Rd civil sites.

- **The Department of Planning should direct that there be crossing guards on all intersections in and close by Haberfield Public School, to reduce the risk of children being injured by the increased volume of heavy and light truck traffic.**

- **The Department of Planning should require the temporary pedestrian bridge over Parramatta Rd be accessible to the public.**

4 Removal of the Darley Rd civil & tunnel site

The removal of Darley Rd site shifts the burden of spoil haulage impacts onto the Camperdown-Haberfield/Ashfield Parramatta Rd corridor with a 39.4% increase in spoil removal from the Camperdown Pyrmont Bridge Rd site to nearly 1.2 million cubic metres, and onto the Campbell Road site, with a 24.9% increase to 0.942 million cubic metres (p6-86, Tale 6-44). Again it is proposed to operate these spoil haulage routes on a 24/7 basis.

The removal of the Darley Rd site means that over 2 million cubic metres of spoil laden trucks from the combination of traffic from the Camperdown and Haberfield sites will impact on Haberfield/Ashfield. See attached table 6-44.

The modification does not outline nor address mitigation and relief from this increased burden. The Department of Planning could impose a couple of measures to enhance mitigation:

- **First, that when-ever the option is available, all spoil laden trucks must use newly available road tunnels and not have the option of using surface roads as is proposed (Camperdown route to Parramatta Rd M4E westbound tunnel & Campbell Road exits into new M5 tunnels).**
- **Second, the Department consider a revised set of CoA to place a curfew on spoil laden trucks traversing from the Camperdown Pyrmont Bridge road tunnel site, via Parramatta Rd, to Ashfield/Haberfield between 10pm and 6 am.**

5 Comment on proposed mitigation measures

The experience of residents in both the M4 East and new M5 projects has been that concurrent and consecutive after hours work, overall noise& vibration, and dust and air pollution impacts have been either under-estimated from cumulative impact, or were known to be a problem that was just never satisfactorily addressed.

The data from the proponents, listed in the attached tables, together with analyses (Tables A-D), demonstrates that the Modification is a significant change of construction sites use, with extra impacts on several locations in and around the M4-M5 Link project.

The Modification report does outline in general terms some proposed mitigation measures. However there should be greater detail given on the options that would be offered to local residents and a clearer plan should be articulated, before final approvals are given. The Department should also identify exactly how it plans to monitor and enforce strengthened compliance of conditions on the M4-M5 Link, as opposed to how the Department has monitored and enforced conditions on the M4East and New M5 projects.

- **The Department of Planning should request a more detailed plan of what management and mitigation measures would be applied, given the significant changes proposed and the increased burden of impact on select areas of the inner west.**
- **Mitigation measures for consideration include:**
    - **Installation of traffic calming measures in and around the project zone**
    - **Extension of the project zone for mitigation to apply, from 50 to 100metres from the boundary**
    - **Increase Property Impact remediation offers around the project sites & traffic routes. Make re-location offers more widely to people affected by continuous project work.**
    - **Provide or fund property impact assessments before the M4-M5 construction occurs, to ensure adequate assessment of settlement or subsidence risks.**
    - **The RMS should broaden offers of voluntary house purchase, at fair prices, to people subject to extensive and sequential project work.**
    - **There should be no use off-road fixed diesel generators. Required Power supply should be installed to project areas before other work commences.**
    - **There should be no use of compressors, unless they are fully sound proofed.**

- **The Use of pedestrian plates should be standard on footpaths to maintain integrity & safety of footpaths**

6 Proposed revised conditions of approval (Modification Chapter 7, pages 7 1-4)

As already described, the proponent argues that the modification is minimalist and tries to avoid conditions set out by the Ministry of Planning.

The proposed amendment of C19 does not address the changes to the use of a hybrid set of site options in Haberfield and Ashfield and the significant shift of increased burden to local communities that have already endured several years of construction intrusion and disruption. Instead the amendment should recognise the proposed Hybrid Option was not identified in the EIS or SPIR. The usage of Option A and Option B sites as identified in the EIS & SPIR has been changed. Further the proposed Hybrid Option is a combination of Option A and Option B usage and represents a new, third construction site Option

Consequently, I cannot support the proposed deletion of C20 Comparative Analysis requirement. C20 should remain and be amended to now require a Comparative Analysis of the Hybrid Option against Option A and Option B

Further, the proposed deletion of C21 Management and Mitigation Report does not take into account the significant changes to heavy vehicle spoil removal in select corridors, as outlined above. C21 must remain and be amended to now require a detailed Management and Mitigation report, based upon the Comparative Analysis. required by C20.

The attached tabular analysis (Tables A-D), identifies the modification proposals are not minor. This makes the proposal, that condition C19 should be amended and that the conditions C20 and C21, be deleted inadequate and flawed.

- **The Department of Planning should not accept the proposed modification of CoA C19, or the deletion of C20 & C21. The Department should still demand compliance with all three conditions, but which are properly amended to reflect the actual changed use of construction sites in Haberfield and Ashfield resulting in 2 civil and tunnelling sites, plus 3 civil sites in our community.**

7 Final Observations and Comment

The consultation process and the opportunity for public comment of the M4-M5 Modification report and application is a flawed process. The proponent, with an army of paid staff and consultants has the capacity to provide its aspirations in a dense a comprehensive and inaccessible manner, which makes independent analysis very difficult. The local community, responding to tight timelines in an unpaid and voluntary capacity, struggles to engage or be heard. This is especially so, if resident's first language is not English, if residents are blind or have any visual impairment, or if residents are not computer literate. Legitimate concerns of residents and businesses are frequently ignored or not given weight. However, in spite of this, the local community has persisted with and responded to constant consultation at very short notice. The responses are always informed by living with WestConnex since 2013. Many of original problems that have been flagged by residents and

businesses remain unresolved. Mitigation measures have not been equitably and consistently applied across Westconnex projects.

The central issue is that for the most part, the consultants and contractors working on this project do not have to live with the consequences of this work on a 24 hour basis. They do a days work in the noisy & dusty construction environment and then go home. Local residents go about their day's work or schooling to then be confronted by the 24 hour project operation, at the very time they try to enjoy recreation and sleep.

Another problem is that when residents have complaints the process is complex. The front line responders are communications and public relations staff, who often lack technical knowledge about the problem of concern and frequently lack specific geographical knowledge. For the most part the engineers and technical staff have frequently solved problems of concern when they are made aware of them. The difficulty has been getting resident and business concern to their attention. The complaint process does not allow for timely and direct communication to people with the skills and ability to resolve many straightforward issues.

The Department of Planning has the capacity to direct improved mitigation and compliance from the proponent and their agents. It is time that equal weight is given to the concern of local residents and businesses, compared with the wishes of proponent and contractor. There are multiple lessons that have been learned on how to do and not do major urban infrastructure projects in the midst of residential and business communities. These lessons should now be applied with improved mitigation and remedy for the all of the Westconnex projects.

- **The Department of Planning should immediately develop project guidelines for the proponents of any extensive infrastructure projects (longer than 6 months), which are conducted in the midst of densely populated urban environments. This should ensure collective lessons learned to date might be better mitigated and managed in the future. These guidelines should be developed in direct consultation and collaboration with residents and businesses, currently living within the shadow of Westconnex.**

- **The Westconnex proponent and Westconnex contractors should have senior engineers and technical staff available to directly review local complaints with residents, to improve complaint resolution mechanisms. Communication and public relations staff should not be the only contact and responder to residents seeking resolution of WestConnex project complaints.**

Attached Tables on WestConnex spoil removal for M4-M5 Link & M4 East

Table A analysis shows the M4 East spoil volume by site, and also as a percentage of total M4 East project spoil. **The Northcote St site, Haberfield had the largest single spoil removal, by volume, for the entire M4 East project (580,000 cubic metres: (24.64%)) and the 4 sites in Haberfield/Ashfield combined bore the largest overall burden of the M4 East project (893,000 cubic metres: (37.94%)).** This does not include the burden caused by spoil removal from the Reg Coady reserve, Haberfield.

Table B analysis highlights increased spoil volume burden on other sites, caused by the proposed M4-M5 Link modifications including the removal of Darley Rd site. It also shows the percentage of project removal spoil removal at each site. **Haberfield, with the adjacent Northcote and Wattle St sites, has 877,000 cubic metres: (29.2%), Camperdown, 1,190,400 cubic metres: (39.5%) and St Peters 942,000 cubic metres: (31.2%).**

Table C analysis demonstrates the M4-M5 Link spoil volume changes and percentage change in spoil volume movement of the proposed modifications in Haberfield from both local tunnelling and transport from Camperdown. **The total spoil volume to be transported both from Haberfield, and through Haberfield, exceeds 2 million cubic metres of spoil**. **The local impact at Wattle St, with both Northcote and Wattle St sites in operation, increases the local burden with the Modification by 181.8% (from 311,000 cubic metres (100%) to 877,000 cubic metres (281.8%)*).**

 # There are two Haberfield spoil haulage routes identified in the Modification: Route A via Five Dock and Route B via the G-Loop (allowing transit either by both surface road or M4 East Wattle St tunnel).

There is no mention in the Modification of spoil haulage route from Wattle St civil and Tunnel site.

The Camperdown spoil haulage route via Parramatta Rd does not mandate the use of the M4 East Parramatta Rd tunnels for travel, and allows for thousands of heavy truck movements in both directions along the surface of Parramatta Rd.

Table D analysis compares spoil volume movement in Haberfield/Ashfield between M4 East and M4-M5 Projects. It shows spoil volume produced locally is roughly equivalent for both projects, (at nearly 0.9 million cubic metres). However, **at over 2 million cubic metres**, there will be a far greater total of spoil haulage through Haberfield/Ashfield from the M4-M5 Link. **This represents over two thirds of the modified M4-M5 project spoil haulage and a 131% increase (from 893,000 cubic metres (100%) to 2,067,400 (231%)) in the spoil haulage from & through Haberfield/Ashfield from the M4 East project.**

Table 4-1 from the M4-M5 Link Modification proposes five construction sites in Haberfield, an increase of two from the three originally proposed in either Option A or B of the M4-M5 Link EIS.

Table 6-44 from the M4-M5 Link Modification, shows the spoil volume predicted from different sites in the M4-M5 EIS versus those with proposed M4-M5 Link Modification. Note local impacts at the four Haberfield/Ashfield sites (Northcote St civil & tunnel site, Wattle St civil & tunnel site Haberfield, plus Parramatta Rd West and Parramatta Rd East civil sites), Camperdown Pyrmont Bridge Road civil & tunnel site, and St Peters Campbell Rd civil & tunnel site.

Also note, that the change in name of the Pyrmont Bridge Road site, from tunnel to civil and tunnel site, indicates a change of usage and probable change of local impacts.

Table 23-5 from the M4-M5 Link EIS shows the predicted volumes of spoil removal in the M4-M5 EIS, comparing impacts of Option A and Option B at Haberfield /Ashfield. Also note that the sites C5, C6, C7 & C8 are not subject to the M4-M5Link modification. These sites are part of Westconnex Stage 3b – Rozelle interchange. The modification only deals with Westconnex Stage 3a –Mainline tunnel Haberfield to St Peters.

Table 6-24 from M4 East EIS shows predicted spoil volume from each site in M4 East project. Also note that a fifth civil site was established in Haberfield, C11, near the Reg Coady reserve. This was established after M4 East EIS, **SPIR & post Approval**.

Tables A-D: Analysis based on M4-M5 Link Modification Table 6-44, and M4East EIS Table 6-24

Table A: Analysis drawn from M4E EIS, Table 6.24, Anticipated Spoil Volumes,

M4E Construction Sites	Tunnel Spoil Volume	Surface Spoil Volume	Total Spoil Volume (Bank Cubic Metres)	%age of total spoil removed
Homebush Bay Drive, C1		244,000	244,000	10.37%
Underwood Rd, C3	162,000	36,000	198,000	8.41%
Powells Creek, C4		4,000	4,000	0.17%
Concord Rd C5	345,000	110,000	455,000	19.33%
Cintra Park, C6	560.000		560,000	23.79%
Northcote St, Haberfield C7	580,000		580,000	24.64
Eastern Ventilation facility, Haberfield C8	125,000		125,000	5.31%
Wattle St & Walker Ave, Haberfield C9		116,000	116,000	4.93%
Parramatta Rd, Ashfield C10		72,000	72,000	3.06%
Total Haberfield/Ashfield	705,000	188,000	893,000	37.94%
TOTAL All sites	**1,772,000**	**582,000**	**2,354,000**	

NOTE: Table A shows the M4 East spoil volume by site, and also as a percentage of total M4 East project spoil. **The Northcote St site, Haberfield had the largest single spoil removal, by volume, for the entire M4 East project (580,000 cubic metres: (24.64%)) and the 4 sites in Haberfield/Ashfield combined bore the largest overall burden of the M4 East project (893,000 cubic metres: (37.94%)).** This does not include the burden caused by spoil removal from the Reg Coady reserve, Haberfield.

Table B: Analysis of the impact of removing Darley Rd site on other sites, from M4-M5 Link Modification Table 6-44. Comparison of indicative spoil volumes for proposed modification

M4-M5 Construction Sites	Spoil Volumes (cubic metres) proposed in M4-M5 EIS	Spoil Volumes (cubic metres) proposed in M4-M5 Modification	%age of spoil removed in proposed M4-M5 Modification	Proposed Spoil Volumes (cubic metres) from M4-M5 EIS to M4-M5 Modification
Northcote civil & tunnel site	NIL	566,300	18.8%	+566,000
Wattle St civil & tunnel site	311,500	311,500	10.4%	0
Parramatta Rd West civil site	520,000	NIL	0	-520,000
Parramatta Rd East civil site	NIL	NIL	0	0
Darley Rd civil & tunnel site	550,300	NIL	0	-550,300
Pyrmont Bridge Rd tunnel site	854.000	1,190,400	39.5%	+336,400
Campbell Rd civil & tunnel site	755,000	942,900	31.3%	+187,900
TOTAL ALL SITES	2,990,800	3,011,100		+20,300

NOTE: Table B highlights increased spoil volume burden on other sites, caused by the proposed M4-M5 Link modifications including the removal of Darley Rd site. It also shows the percentage of project removal spoil removal at each site. **Haberfield, with the adjacent Northcote and Wattle St sites, has 877,000 cubic metres: (29.2%), Camperdown, 1,190,400 cubic metres: (39.5%) and St Peters 942,000 cubic metres: (31.2%).**

Table C: Analysis of impact on Haberfield/Ashfield, from M4-M5 Link Modification Table 6-44. Comparison of indicative spoil volumes for proposed modification

Spoil Volume from Construction Sites	**Spoil Volumes (cubic metres) proposed in M4-M5 EIS**	**Spoil Volumes (cubic metres) proposed with M4-M5 Modification**	**Spoil Volumes (cubic metres) Haulage through Haberfield with M4-M5 Modification**	**Spoil Volumes (cubic metres) percentage change from M4-M5 EIS to M4-M5 Modification**
Total Spoil from Ashfield	520.000	NIL	NIL	
Total Spoil from Haberfield (Northcote St site & Wattle St site)#	311,500	877,800	877,800	**181.8% (from 100% to 281%*)**
Total Spoil haulage west from Camperdown, (Pyrmont Bridge Rd site) via Parramatta Rd	854,000	1,190,400	1,190,400	39.4**%**
Total spoil haulage from Camperdown and Haberfield sites			**2,067,400**	

Note: Table C demonstrates the M4-M5 Link spoil volume changes and percentage change in spoil volume movement of the proposed modifications in Haberfield from both local tunnelling and transport from Camperdown. **The total spoil volume to be transported both from Haberfield, and through Haberfield, exceeds 2 million cubic metres of spoil**. **The local impact at Wattle St, with both Northcote and Wattle St sites in operation, increases the local burden with the Modification by 181.8% (from 311,000 cubic metres (100%) to 877,000 cubic metres (281.8%)*).**

There are two Haberfield spoil haulage routes identified in the Modification: Route A via Five Dock and Route B via the G-Loop (allowing transit either by both surface road or M4 East Wattle St tunnel).

There is no mention in the Modification of spoil haulage route from Wattle St civil and Tunnel site.

The Camperdown spoil haulage route via Parramatta Rd does not mandate the use of the M4 East Parramatta Rd tunnels for travel, and allows for thousands of heavy truck movements in both directions along the surface of Parramatta Rd.

Table D: Analysis of Spoil Removal Impacts on Haberfield & Ashfield. Comparison between M4E and M4-M5 Link projects

Westconnex Project	Volume of spoil (cubic metres) removed from Haberfield & Ashfield	Total Volume of Project spoil removed	%age of Project spoil removed from Haberfield & Ashfield	Volume of spoil haulage through Haberfield & Ashfield	%age of project spoil haulage through Haberfield & Ashfield
M4 East	893,000	2,354,000	37.94%	893,000	37.94%
M4-M5 Link	877,000	3,011,100	29.15%	2,067,400	68.66%

Table D compares spoil volume (from tunnel and civil sites) in Haberfield/Ashfield between M4 East and M4-M5 Link Projects.

It shows spoil volume produced locally is roughly equivalent for both projects, (at nearly 0.9 million cubic metres). However, **at over 2 million cubic metres**, there will be a far greater total of spoil haulage through Haberfield/Ashfield from the M4-M5 Link. **This represents over two thirds of the modified M4-M5 project spoil haulage and a 131% increase (from 893,000 cubic metres (100%) to 2,067,400 (231%)) in the spoil haulage from & through Haberfield/Ashfield compared with the M4 East project.**

M4-5 Link Modification

Section 4, Table 4-1, P 4-1

Table 4-1 Change to construction ancillary facilities at Haberfield, Ashfield and Leichhardt

EIS and SPIR	Proposed modification
Wattle Street civil and tunnel site (C1a)	No change
Haberfield civil site (C2a/C2b)[1]	No change
Northcote Street civil site (C3a)	Northcote Street civil and tunnel site. Includes tunnelling, spoil handling and spoil haulage from this site.
Parramatta Road West civil and tunnel site (C1b)	Parramatta Road West civil site[2] Inclusion of a temporary pedestrian walkway above Parramatta Road to link to the Parramatta Road East civil site.
Parramatta Road East civil site (C3b)	Parramatta Road East civil site[2] Inclusion of a temporary pedestrian walkway above Parramatta Road to link to the Parramatta Road West civil site.
Darley Road civil and tunnel site (C4)	Removal of site

Notes

1. The use and footprint of this site was amended in sections A3.3.1, B11.6.8 and C6.1.3 of the SPIR to be as per the arrangement for the Haberfield civil site (C2b).
2. Condition C19 allowed use of the site for parking and other works that do not exceed the 'noise affected' Noise Management Levels as identified in the ICNG.

Note: The Modification proposes five construction sites in Haberfield, an increase of two from the originally proposed three in either Option A or B of the M4-M5 Link EIS.

Section 6.5.6, Table 6-44, P 6-86

6.5.6 Resource use and waste

The proposed modification would result in changes to spoil volumes generated from the tunnelling sites for the project. **Table 6-44** details the change in indicative spoil volumes compared to the volumes described in section 23.3.2 of the EIS.

Table 6-44 Comparison of indicative spoil volumes for the proposed modification

Tunnelling site	Spoil volumes (cubic metres) EIS	Spoil volumes (cubic metres) proposed modification
Northcote Street civil and tunnel site	n/a	566,300
Wattle Street civil and tunnel site	311,500	311,500
Parramatta Road West civil site	520,000	n/a
Darley Road civil and tunnel site	550,300	n/a
Pyrmont Bridge Road tunnel site[1]	854,500	1,190,400
Campbell Road civil and tunnel site	755,000	942,900

Notes:

1. Pyrmont Bridge Road tunnel site was renamed to Pyrmont Bridge Road civil and tunnel site in the SPIR

The spoil volumes outlined in **Table 6-44** are indicative and may change subject to detailed design and construction planning.

NOTE: Table 6-44 from the M4-M5 Link Modification, shows the spoil volume predicted from different sites in the M4-M5 EIS versus those with proposed M4-M5 Link Modification. Note local impacts at the four Haberfield/Ashfield sites (Northcote St civil & tunnel site, Wattle St civil & tunnel site Haberfield, plus Parramatta Rd West and Parramatta Rd East civil sites), Camperdown Pyrmont Bridge Road civil & tunnel site, and St Peters Campbell Rd civil & tunnel site.

Also note, that the change in name of the Pyrmont Bridge Road site, from tunnel, to civil & tunnel site, indicates a change of usage and probable change of local impacts.

M4-M5 Link EIS (Section 23.2, Table 23-5, p 23-8)

Anticipated spoil volumes generated from each construction ancillary facilities site for tunnelling and surface works are outlined in **Table 23-5**. Up to about 4,000,000 cubic metres of spoil would be generated during construction of the project. This large volume of spoil is a result of constructing tunnels to accommodate up to four lanes of traffic in each direction and large underground interchanges (the Inner West subsurface interchange and the Rozelle interchange).

Table 23-5 Anticipated spoil volumes

Site	Estimated spoil volume (cubic metres)		
	Tunnel	Surface	Total
Wattle Street civil and tunnel site (C1a)	276,500	35,000	311,500
Haberfield civil and tunnel site (C2a)[1]	276,500	-	276,500
Parramatta Road West civil and tunnel site (C1b)	500,000	20,000	520,000
Darley Road civil and tunnel site (C4)	549,500	10,500	560,000
Rozelle civil and tunnel site (C5)	1,008,000	35,000	1,043,000
The Crescent civil site (C6)	-	43,800	43,800
Victoria Road civil site (C7)	-	25,000	25,000
Iron Cove Link civil site (C8)	-	44,100	44,100
Pyrmont Bridge Road tunnel site (C9)	849,500	5,000	854,500
Campbell Road civil and tunnel site (C10)	715,000	40,000	755,000
Total (with Option A ancillary facilities)	**3,675,000**	**238,400**	**3,913,400**
Total (with Option B ancillary facilities)	**3,622,000**	**223,400**	**3,845,400**

Note:

[1] The Haberfield civil and tunnel site would be used as a support site for the construction of the M4-M5 Link/M4 East connection. This construction ancillary facility would be used to transport small plant, workers and materials. Tunnel spoil would not be transported to the surface from these tunnelling works. All spoil transport from these tunnelling works would occur via the M4 East tunnels and the M4 East Motorway.

NOTE: Table 23-5 from the M4-M5Link EIS shows the predicted volumes of spoil removal in the M4-M5 EIS, comparing impacts of Option A and Option B at Haberfield /Ashfield. Also note that the sites C5, C6, C7 & C8 are not subject to the M4-M5Link modification. These sites are part of Westconnex Stage 3b – Rozelle interchange. The modification only deals with Westconnex Stage 3a –Mainline tunnel Haberfield to St Peters.

M4 East EIS 2015 (Vol 1A, Section 6.9. Table 6-24, p 6-55)

Anticipated spoil volumes generated from each construction ancillary facilities site for tunnelling an surface works are outlined in **Table 6.24**.

Table 6.24 Anticipated spoil volumes

Site	Estimated spoil volume (bank cubic metres)		
	Tunnel	Surface	Total
Homebush Bay Drive civil site (C1)	-	244,000	244,000
Underwood Road civil and tunnel sites (C3)	162,000	36,000	198,000
Powells Creek civil site (C4)	-	4,000	4,000
Concord Road tunnel site (C5)	345,000	110,000	455,000
Cintra Park tunnel site (C6)	560,000	-	560,000
Northcote Street tunnel site (C7)	580,000	-	580,000
Eastern ventilation facility site (C8)	125,000	-	125,000
Wattle Street and Walker Avenue civil site (C9)	-	116,000	116,000
Parramatta Road civil site (C10)	-	72,000	72,000
Total	**1,772,000**	**582,000**	**2,354,000**

NOTE: Table 6-24 from M4 East EIS shows predicted spoil volume from each site in M4 East project. Also note that a fifth civil site was established in Haberfield, C11, near the Reg Coady reserve. This was established after M4 East EIS, **SPIR & post Approval.**