

Major Transport Projects Facilitation Act 2009

East West Link (Eastern Section) Project

Assessment Committee Report

Volume 2 – Appendices

30 May 2014



Appendices

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Appendix A: Terms of Reference



EAST WEST LINK (EASTERN SECTION) PROJECT

ASSESSMENT COMMITTEE APPOINTED UNDER SECTIONS 35 AND 235 OF THE MAJOR TRANSPORT PROJECTS FACILITATION ACT 2009

The Assessment Committee has been appointed under sections 35 and 235 of the *Major Transport Projects Facilitation Act* 2009 (**the Act**) to assess the Comprehensive Impact Statement (**CIS**) for the East West Link (Eastern Section) Project (**the project**), and to make recommendations to the Minister for Planning (**the Minister**) whether or not to grant any applicable approval required for the project to be developed and if so to recommend appropriate conditions for applicable approvals. The Terms of Reference set out below have been prepared with consideration of the time requirements under the Act.

TERMS OF REFERENCE

1. TASK

Subject to these Terms of Reference, which are made under section 36 of the Act, the Assessment Committee has all the powers, functions and discretions conferred on an Assessment Committee under Parts 3 and 8 of the Act for the purposes of the project.

In accordance with section 36 of the Act, the Minister directs the Assessment Committee to undertake the following tasks

- (1) Prepare a summary of all public submissions made to the Assessment Committee regarding the CIS.
- (2) Prepare an Assessment Committee Recommendation in accordance with section 73 of the Act, supported by a report that evaluates all applicable law criteria for applicable law approvals sought for the project.
- (3) In preparing the Assessment Committee Recommendation and report, the Assessment Committee is directed to:
 - (a) assess the CIS in accordance with the Act, subject to these terms of reference
 - (b) consider the alignment, design and performance requirements for the project that may be implemented within the project boundary identified in Figure 1 (dated 2 October 2013) of the Mapbook in the CIS
 - (c) make recommendations as to appropriate conditions to be attached to any applicable law approvals: such conditions are to include conditions to address the environmental and urban design performance of the project, having regard to opportunities to manage environmental and urban design outcomes through contractual arrangements that the State may enter into, as outlined in the CIS.

2. PROCEDURE

The Assessment Committee is to adopt the following procedure, consistent with the provisions of the Act:

- (1) Commence its investigations from the date of receiving these Terms of Reference.
- (2) Consider:

the exhibited CIS

- all properly made submissions made to the Assessment Committee relating to the CIS
- any advice received from an applicable law decision-maker under section 65 of the Act
- any information requested from a person or applicable law decision-maker under section 245(2) of the Act
- other relevant information either provided to or obtained by the Assessment Committee that is necessary for the Assessment Committee to provide its Assessment Committee Recommendation and report in accordance with paragraphs 1(2) and 1(3) of these Terms of Reference.
- (3) Conduct an information session, preferably during the exhibition of the CIS, at which the proponent and its technical advisers outline the content of the CIS for the Assessment Committee, to which the public may at the discretion of the Assessment Committee be invited.
- (4) Make any request to the proponent in accordance with section 57(4) within 20 business days after the end of the public exhibition period for the CIS. The proponent's response to this request is to be provided within 20 business days of the Assessment Committee's request. Both the Assessment Committee's request and the proponent's response to it are to be published in a timely manner on a website accessible by the public. The Assessment Committee may permit submitters appearing before the Assessment Committee to address issues arising from the proponent's response to the Assessment Committee's request.
- (5) Conduct a Preliminary Hearing, in accordance with section 57 of the Act, for the purposes described in section 57(1). At the Preliminary Hearing the Assessment Committee may:
 - (a) outline the matters or further information (if any) that the Assessment Committee intends to request the proponent to address in accordance with section 57(4) of the Act
 - (b) provide appropriate directions to submitters and the proponent regarding the conduct of the Public Hearing, including any expert evidence that the Assessment Committee wishes to appear before it
 - (c) request the proponent, agencies and any submitter to provide information that may be required to assist the Assessment Committee to formulate a timetable for its Public Hearing, including a schedule for presentations by submitters and agencies and any expert evidence.

- (6) Commence a Public Hearing within 15 business days of the date by which the proponent's response to any request from the Assessment Committee under section 57(4) is to be provided.
- (7) Conduct a Public Hearing, in accordance with Division 2 of Part 8 of the Act, to hear properly made submissions confined to the following matters.

Public Hearing Matters

- (a) Whether the impacts of the project on the traffic performance of roads connecting to the project, and the surrounding road network, as well as on connectivity for public transport, cycling and pedestrians, have been appropriately addressed.
- (b) Whether the impacts of the project on land use and infrastructure in its immediate environs, including on housing, recreation and community facilities, have been appropriately addressed.
- (c) Whether the proposed Urban Design Framework in the CIS will appropriately manage visual impacts of the project on the surrounding area, including public open spaces.
- (d) Whether the noise, vibration, air emission and light spill impacts of the project will be appropriately managed by proposed measures.
- (e) Whether the impacts of the project on cultural heritage places have been appropriately addressed.
- (f) Whether the impacts of the project on surface and ground waters have been appropriately addressed.
- (g) Whether the impacts of the project on native vegetation and biodiversity have been appropriately addressed.
- (h) Whether the risk from disturbance and disposal of solid wastes has been appropriately addressed.
- (i) Whether the Environmental Management Framework in the CIS will provide an effective integrated approach to manage the environmental performance of the project.
- (8) At the discretion of the Assessment Committee, seek written or verbal information or advice from such experts or specialists, or retain the services of such experts or specialists, as the Assessment Committee considers would assist it to meet its purpose and carry out its functions. Any such information or advice must be publicly disclosed (unless it is of a confidential nature). Any associated costs and expenses are to be recoverable from the proponent in accordance with section 253 of the Act.
- (9) At the discretion of the Assessment Committee, to retain legal counsel to assist the Assessment Committee to meet its purpose and carry out its functions. Any legal counsel appointed may assist in the questioning of witnesses, as required. Any associated costs and expenses are to be recoverable from the proponent in accordance with section 253 of the Act.
- (10) To make available on a publicly accessible website all submissions, expert evidence, major presentations, the Hearing timetable and other information relevant to the Public Hearing.

Conduct of Hearings

The Assessment Committee must conduct its Public Hearing in accordance with Division 2 of Part 8 of the Act and in accordance with the following directions.

- (1) The conduct of the Public Hearing is to be managed by the Chairperson or the presiding member nominated by the former. The Chairperson or presiding member may regulate proceedings in a manner that he/she considers appropriate to best allow the Assessment Committee to inform itself, and may give directions as to the conduct of the Public Hearing.
- (2) In scheduling the Public Hearing, the Assessment Committee is to provide any submitter a reasonable opportunity to make submissions on a Public Hearing Matter, having regard to both its task and time requirements under the Act.
- (3) The form of the presentation of any submissions which the Assessment Committee will be provided with may be the subject of direction by the Assessment Committee.
- (4) Questioning of submitters and any expert witnesses is to be controlled, and conducted primarily, by the Assessment Committee. At its discretion the Assessment Committee may accept questions received either verbally or in writing from participants at the Public Hearing. The Assessment Committee may prohibit or regulate such cross-examination if it considers that it is necessary or appropriate to do so in order to assist it to undertake its task.
- (5) The proponent must be given an opportunity to respond to submissions made during the Public Hearing at the conclusion of the Public Hearing.

3. TECHNCIAL AND ADMINISTRATIVE SUPPORT

Planning Panels Victoria is to provide administrative support to the Assessment Committee. The Assessment Committee may also engage additional technical and administrative support.

4. FEES

The members of the Assessment Committee will receive the same fees and allowances as prescribed for a Panel appointed under Division 1 of Part 8 of the Planning and Environment Act 1987.

APPROVED:

MATTHEW GUY MLC Minister for Planning

DATE:

Appendix B: List of Submitters



Sub. No.	Surname	First name	Organisation
1	Tandora	Michael	
2	Stock	Petra	
3	Akehurst	Jeff	Glen Eira City Council
4	Lewis	Adam	
5	Douglas	Paul	
6	Rymer	Burnie	
7	Rankin	Gregory	
8	Jarvis	CE	
9	Ng	Margaret	
10	Rankin	Gregory	
11	Rankin	Gregory	
12	Pilkington	Daniel	
13	Wilkinson	Michael	
14	Manifold	Marion	
15	Vulin	Julie	
16	Pearl	Maureen	
17	Fisher	Amity	
18	Sambrook	Gareth	
19	Liston	Bernadette	
20	Bentley	John	
21	O'Donnell	Jennifer	
22	Assan	Eugene Baiden	
23	Freeland	Peter	
24	Roberts	Simon	
25	Luckins	Tanja	
26	McClaren	Andrew	
27	Confidential		
28	Lovering	Adam	
29	McLean	Robert	

30	Taylor	Hamish	
31	Minicucci	Daniela	
32	Kershaw	Pam	
33	Hutson	Betsa	
34	Endean	Raymond	
35	Isaac	Eve	
36	McLeish	Anne	Grandparents Victoria Inc
37	Thwaites	Michael Jonathan	
38	Bohan,Salvado	Cindy & Trevor	
39	Kalina	Paul	
40	Genc	Sevgi	
41	Teague	Julie A	
42	Gallagher	Suzette	
43	Frith	Denis	
44	McGaw	Janet	
45	Burton	Liz	
46	Petinatos	Jennifer	
47	Petinatos	Peter	
48	Oaten	Roderick S V	
49	Virgona,O'Toole	Crina & Nancy	
50	Ingram	Lisa	
51	Rost	Hendrik	
52	Johns	Kirsty	
53	Flanagan	Peter	
54	Sinclair	Paul	Youlden Parkville CC
55	Menis	Frank	RJFA Nominees
56	Ray	Darren	
57	Kojic	Vasvija	
58	Jacob	Ashok	Mar Thoma Syrian Church

59	Stewart	Graeme	
60	Page	Christopher/Fiona	
61	Thom	Lessa	
62	Strasser	Andreas	
63	Yesuf	Huda Mahadi	
64	Mack	lan	
65	Howden	Nick	
66	Hofer	Karen	
67	Stefanou	Tony	
68	Keel	Monique	
69	Cicala	Robert	
70	Cicala	Claire	
71	Halkin	Janet	
72	Allen	Fred	
73	Kahn	Alec	Mercantile Cricket
			Association
74	Angelis	Jeremy	
75	McKay	Eric H	
77	Allard	Nicole	
78	Jackson	Mal	
79	Rice	Janet	
80	Cusack, Avery	Julia & Steven	
81	Bilby	Chris	
82	Heverin	Greg	Provans Timber &
			Hardware
83	Taylor	Wendy	
84	Dowd	Kylie	
85	Johnson	Josephine	
86	Ethell	Linda	
87	Gordon	Giovanna	
88	Payton	David Albert	
89	Higgs	Peter	

Martin	Kerry	
Dwyer	Chris	
Iser	Rose	
Dobson	Graeme	
Williams	Jennifer	
Rogers	Tony	Parkville Gardens
		Residents
		Association
McCaw	Douglas	
Thomas	Sarah	
Gunn	Meredith	
Cusack	Brendan	
Harding	Peter	
McKenzie	Simon	
Roy	Dr. S.	
Wynn-MacKenzie	Karen	
McHardy	Pamela	
Smith	Helen	
Greenbaum	Geoffrey	
Fennell	Naomi	
Green	Dennis	
Petit	Michael	
Trippas	Johanne	
Unkles	William	
Aplin	Greg & Carol	
Hooper	Christine	
Pepper	Susan	
Rubens	Fleur	
O'Malley	Joan	
Tregonning	Mark	
Jungwirth	Margaret	
Bradbeer	Margaret	
	Dwyer Iser Dobson Williams Rogers McCaw Thomas Gunn Cusack Harding McKenzie Roy Wynn-MacKenzie McHardy Smith Greenbaum Fennell Green Petit Trippas Unkles Aplin Hooper Pepper Rubens O'Malley Tregonning Jungwirth	Dwyer Iser Rose Dobson Graeme Williams Jennifer Rogers Tony McCaw Douglas Thomas Sarah Gunn Meredith Cusack Brendan Harding Peter McKenzie Simon Roy Dr. S. Wynn-MacKenzie Karen McHardy Pamela Smith Helen Greenbaum Geoffrey Fennell Naomi Green Dennis Petit Michael Trippas Johanne Unkles William Aplin Greg & Carol Hooper Pepper Susan Rubens Fleur O'Malley Joan Tregonning Mark Jungwirth Minnifer Aplin Graem Rose Douglas Tony Meredith Karen Meredith Maraen Douglas Tony Meredith

120	Bocquet	Stephen	
121	George	Robert	Owners
			Corporation 18
			Lennon St Parkville
			3052
122	Pisano	Francesca	
123	Vigus	Ruth	
124	Lowe	Ralph	
125	McQuilten	Mark	
126	Manzie	Graeme	
127	Hunt	Yvonne	
128	Sabato	Antony &	
120	Jabato	Josephine	
129	Baker	Peter	
130	Edmonds	Joseph	
131	Howden	Emma	
132	Beckett	Alexis	
133	Ashton Lomax	Giulian	
134	Brumm	Andrew	
135	Sinha	Jogendra &	
		Poonamrani	
136	Burrows	Roy	
137	Ingleton	Roxane	
138	Emslie	Dianne	
139	Lewicki	Chris	
140	Gray	Dr Stephen	
141	Lebetzis	Amalia	
142	Isakson	Meredith	
143	Flinn, Schultz	Bernard & Amina	
144	Padgham	Lin	
145	Slota-Kan	Dr Simon	
146	Noonan	Kate	

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147	Cobb	Danielle	
148	Moore	Craig	
149	Waller	Margaret	
150	Howden	Rob	
151	Bunbury	Ande	
152	Harrigan	Kate	
153	Kelly	Ruth	
154	Kennedy, Ettershank	Kate & David	
155	Eldridge	John	
156	Mantell	Harriet	Residents Against The Tunnel (RAT)
157	Pearson	Danny	
158	Bagwell	Geraldine	Bayside Climate Change Action Group
159	Bagwell	Geraldine	
160	Dawson	Ben	
161	Bowen	Jennifer	
162	Rao	Α	
163	Fotopoulos	James	
164	O'Hanlon	Seamus	
165	Triantafillou	Apostolos	
166	Vandenberg	Monica	
167	Morris	Alan	
168	Taaffe	Jenny	
169	Frost	Pamela	
170	Richter	Tim	
171	Bolt	Carmel	
172	Rushworth	Susan	
173	Bird	lan	Carlton Residents Association Inc.
174	Mullan	Kerry	

175	Hancock	Anna	
176	Hanna	David	
177	Ingram	Michael	
178	Campbell	Peter	
179	Ennis	Cynthia	
180	Barco	Emile	
181	Norris	James	Heritage Council of Victoria
182	Di Muccio	Christine	
183	Rogers	Susan	
184	Sun	Jun	
185	Mossonidis	Michael	
186	Walker	Adrian	
187	Walker	Barbara	
188	Savage	Anne	
189	Dixon	Carol & Mark	
190	McInnes	James	
191	Tozzi	Lee	
192	Burnet	Robert & Judith	
193	Coyne	Robyn	
194	Moyle	Haydn	
195	Fredericks	Bruce	
196	Clarke	Victoria	
197	Denis	Patricia	
198	Yoshida, Anderson- McDonald	Aki & Jack	
199	Bonanno	Tony	
200	Saint	Fiona	
201	Mantell	Harriet	
202	Honan	Patrick & Liliane	
203	Geary	Peter	
204	Ilyine	Frances	

205	Humphreys	Robert	
206	Beauchamp	David	
207	Graves	Dr Kynan	
208	Ruwoldt	Grant	
209	Lucas	Janet	
210	Green	Dennis	
211	Carmichael	Anne & Rob	
212	Lee, Lovel	Stephanie &	
212	Lee, Lovei	Peter	
213	Pretto	Gabriella	
214	Withdrawn		
215	Barclay	Zoe & Benjamin	
216	Del Monaco	Chris	
217	Mackenzie	Janine	
218	Malkiewicz	Justin	
219	Marshall	Nicole	
220	Gibson	John	
221	Peters	Marilyn	
222	Bray	Greg	
223	Bray	Vienna Khaya	
224	Saunders	Cheryl	
225	Chandra-Shekeran	Kavitha	
226	Marshman	Kay	
227	Galvin, Todd	Pauline & Richard	
228	Green, Golding	Monica & Ben	
229	Batterbury	Dr Simon	
230	Apperley , Jackson	Cheryl & Paul	
231	Castles	Hannah	
232	Stephenson	Andrew	
233	Confidential		
234	Neilson	Graham	
235	Elliott	Р	

236	Rimington	Harry	
237	Thomson	Bonnie	
238	Voon	Tania	
239	Cicala	Claire	
240	Scambler	Diana	
241	Thomas	Bronwyn	
242	Huynh	Trieu	
243	Provis	Beatka	
244	Chilianis	Melanie	
245	Colasante	Meg	
246	Milankovic	Marina	
247	Тоор	Jessica	
248	Burton	Ben	
249	Wilson	Cameron	
250	Moore, O'Keefe	Jo & Damian	
251	Muhlfait	Petra	
252	Nowak	Lidia	
253	Swain	Alexander	
254	Peyton	Anthony	
255	Coleman	Brett & Joanne	
256	Powell	Miriam	
257	Peyton	Anthony	Safety Net for Royal Park
258	Hatfield	Bette	Glen Eira Residents Association Inc
259	Clarke	Alison	C/O Clifton Hill Child & Adolescent Therapy Group
260	Thomson	Ross	., .
261	Cusack	James	
262	LeGallez, England	Kate & Thomas	
263	Phefley	Anne	

264	Milne	James	
265	Taylor	Grant	
266	Kippin	Paul	
267	Kippin	Justine	
268	Summers	Α	
269	Avotins	Julie & Anthony	
270	Hoebartner	Elisabeth	
271	Bell	Dave	
272	Kinrade	-	
273	Confidential		
274	Loughlin	Graeme	
275	Loveless	Kerrie	
276	Temby	Jonathon	
277	Marley	Phil	
278	Gawne	Jennifer	
279	Grant	Robyn	
280	Worsnop	Tom	
281	O'Donnell	Gerard	
282	Vernon	Sarah	
283	Smith	Dr Olivia &	
		Michael	
284	Quirk	Susan	
285	Treloar	Lucy	
286	Newton	April	
287	Wakhlu	Suresh	
288	Barnett	Matthew	
289	McDonald	Vivien	
290	Hobson	Paul	
291	Watkin	Freda	Yarra Campaign for
			Action on
			Transport
292	Bransgrove	Grant	

293	Beckett	Paul	
294	Bosler	Danae	Public Transport
			Not Traffic
295	Neville	Jeffrey	
296	Mooney	Russell	
297	Muir	Rilke	Kensington
			Association (Inc)
298	Plancarte Fexas	Maria	
299	Gallivan	Jennifer	
300	Haynes	Kerry	
301	Confidential		
302	Savage	Geoffrey	
303	Zhou	Shuai	
304	Keefe	Hilary	
305	Mullan	Marguerite	
306	Koufariotis	Magda	
307	Longden	Catherine	
308	Thomas	Jan	
309	Grant	Ramon	
310	Mills	Julie & Denis	
311	Nagels	Peter	
			Upgrade Upfield
312	Watson	Denis	Corridor
			Committee
313	Smith	Tony	Kororoit Institute
314	Hindley	Anne	
315	Ley	Gordon	
316	Day	Katherine	
317	Krelle	Robert	The Parkville
			Association
318	Bishop	Nicholas	
319	Wayth	Rod	

320	Gallivan	Paul Anthony	
321	Lester	Chris	
322	Wright	Kelly	
323	Boyle, Jones	Kentia & Nigel	
324	Komninos	Peter	
325	Тарре	Andrea Leigh	
326	Goodman	Chris	The 3068 Neighbourhood
			Group (Inc)
327	Stewart	Graeme	
328	Boyce	Anthony	University High School, Vic University Football Club
329	Mickelburough	Peter	
330	Klingspohn	Britta	
331	Hindle	Ben	
332	Fischetto	Michelle	Vision Australia
333	Summerton	Michele	
334	Noble	Margaret	
335	Masters	Helen	
336	Urban	Milan	
337	Thomas	Anthony & Margaret	
338	Howden	Lynette Mary	
339	Polack	Sharelle	Cultivating Community
340	Quirk	Jill	Sustainable Population Aust. Vict & Tas. Branch
341	Lee	Albert	Elderly Chinese Home

342	West	Terri	
343	Di Iallo	Franc	
344	Minister for Planning		
345	Keogh	Janice	
346	Keogh	Neville	
347	Coppini	Danielle	
348	Hardy	David & Lori	
349	Robinson	Tony	Environmental
		,	Protection
			Authority, Victoria
350	Boag	David	
351	Boag	Millicent	
352	Campbell	Geoff	
353	Nataprawira	Thomas	
354	McQuillan	Kevin	Travancore Park
			Users Group
355	Healy	Suzie	
356	West	Mark	
357	Bunbury	Alisa	
358	Ross	Lorraine	
359	Bush	Asahel	
360	Preston	Heath	
361	Keogh	Patrick	
362	Hindle	Heather	
363	Rogers	Tim & Melissa	
364	Wardell/Tuschke	Rob/Hagen	
365	Ferguson	Anthony Francis	
366	Jones	Ronald	Australian Institute
			of Landscape
			Architects
367	Bilyanska	Julia	
368	Coat	John	

369	Coat	Sarah	
370	den Hollander	Jason	Bicycle Network
371	Morel	John	
372	White	Dr Susan & Mr	
		Nicholas	
373	Cummings	Karen	Collingwood
			Historical Society,
			Inc
374	Lanigan	Anna	
375	Cooper	Dianne	
376	Grant, Casey	Rebecca & James	
377	Confidential		
378	Hilton	Alison	
379	Confidential		
380	Maroun	Lina	Owners at 117
			Manningham
			Street Parkville
381	Barnett	Matthew	
382	Bazelmans	Dr Jeff	Port of Melbourne
362	Dazeiiilalis	Di Jeli	Corporation
383	Hasthorpe	S	
384	Herington	Andrew	
385	Schubert	Paul	
386	Cox	John	
387	Bourke	Leon	
388	Reece	Mike	Victorian Transport
			Research & Action
			Group
389	Wallis	lan	
390	Chachs	David	
391	Wingett	Virginia	
392	Stewart	Graeme	

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			Citizens for a
393	Munroe	Angela	Liveable
			Melbourne
394	O'Brien	Dr Darragh	Inner Melbourne
			Planning Alliance
			(IMPA)
395	Bauld, Olsson	Catherine & Craig	
396	-	-	Friends of Royal
			Park, Parkville Inc
397	Schober	Rod	
398	Gibb, Blanch	Sybil & Ian	
399	Farag	Samira	Flemington
			Neighbourhood
			Renewal
400	Naylor	Michael	
401	Varigos	Kathleen	
402	Morel	Theresa	
403	de Vietri	Gabrielle	
404	Laurie	Robyn	
405	Bell	Fiona	
406	Menhennet	Naomi	
407	McDougall	Andrew	
408	Sholl	Eddie	
409	Long	Patricia	
410	Lueckenhausen	Isolde	
411	Westwood	John	
412	Villani	Eleanor	
413	Nataprawira, Newell	Joanne & Dylan	
414	Ursida	Carlo	
415	Elbourne	Joel	Banyule City
			Council
416	O'Donnell	Graham	

417	Gunn	lan	
410	Fitzeilele en Conenteniele	Bernadette &	
418	Fitzgibbon, Swarbrick	Mark	
419	Inglis, Erber	Susan & Norm	
420	Araneda	Maritza	
421	Confidential		
422	Clay	Marian	
423	Barnett	Julia	
424	Clay	Tess	
425	Clay	Richard	
426	Angliss	Tom	Asciano Limited
427	Scott	James	Moreland City
			Council
428	McDonough	Stephen	Capella Capital
			West Brunswick
429	Touzel	Raphael	Amateur Football
			Club
430	Stathis	Christos	Essendon Royals
			Soccer Club
431	Miller	Patricia	
432	Blyth	Jillian	
433	Blay	Stella	
434	Wynne, Tee MPs	Richard & Brian	Parliamentary
			Representatives
435	Choong, Tan	Tina & Michael	
436	Arbuzova	Olea	
437	Moodie	Dr Simon	
438	Anderson	James	
439	Peterson, Peck	Lucinda &	Property
		Christopher	Committee 46
			Manningham
			Street

440	Rio	Robert	
441	Muir	Rilke	
442	Lamb	Allison	
443	Giudice	Peter	
444	Empson	Lucy	
445	Wilson	lan	
446	Volpe	Maria	
447	Harding	Joel	
448	Sheedy	Katherine	
449	Plaister	Nicholas	
450	Horacek	Judy	
451	Lee-Archer	Lachlan	
452	Kociuba	Greg	
453	Moloney	David	Cardijn Community Australia (Inc)
454	Isaac	Anne	
455	Smith	Cheryl	
456	Phelan	Justine	
457	McCarthy	Paula	
458	Russell	Kate	
459	Salmon-Lomas	Peter	
460	Rafter	Anthony Stuart	Parkville District Cricket Club
461	Strain	Susie	Metropolitan Transport Forum
462	Campbell	Sylvia	
463	Withdrawn		
464	Newton	Elizabeth	
465	Berry	Maria	Football Federation Victoria
466	Esterhuizen	Johan	Jemena Electricity Networks (Vic) Ltd

468 Connors Tim 469 Robinson Kathy 470 Confidential 471 Wood Renee 472 Thorne, Todhunter Kay & Tim 473 Cruise Lachlan 474 McCallum Graham 475 May Rebecca Pty Ltd (APA Group) 476 Lee Alexander 477 Tan Yew-Aik 478 Kimm Anna 479 Beechey Ann 480 Walter Clare 481 Moodie Jane 482 Nalepka Elizabeth 483 Malesic Anne Marie 484 Macmillan Luisa Management Committee Inc 485 Kimm Joan 486 Gorman Brent & Harley 487 Lipsys Jonas 488 Turner Denise 489 Agudo Roberto Anne Prowernet Pty Ltd T/A SP AusNet 491 Savige Douglas 492 Kimm Geoff	467	Dunn	Eileen	
469RobinsonKathy470Confidential471WoodRenee472Thorne, TodhunterKay & Tim473CruiseLachlan474McCallumGraham475MayRebeccaPty Ltd (APA Group)476LeeAlexander477TanYew-Aik478KimmAnna479BeecheyAnn480WalterClare481MoodieJane482NalepkaElizabeth483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas				
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478KimmAnna479BeecheyAnn480WalterClare481MoodieJane482NalepkaElizabeth483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	476	Lee	Alexander	
479BeecheyAnn480WalterClare481MoodieJane482NalepkaElizabeth483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	477	Tan	Yew-Aik	
480WalterClare481MoodieJane482NalepkaElizabeth483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	478	Kimm	Anna	
481MoodieJane482NalepkaElizabeth483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	479	Beechey	Ann	
482NalepkaElizabeth483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	480	Walter	Clare	
483MalesicAnne Marie484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	481	Moodie	Jane	
484MacmillanLuisaMerri Creek Management Committee Inc485KimmJoan486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	482	Nalepka	Elizabeth	
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486GormanBrent & Harley487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	484	Macmillan	Luisa	Management
487LipsysJonas488TurnerDenise489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	485	Kimm	Joan	
488 Turner Denise 489 Agudo Roberto Acciona Infrastructure 490 McCrohan Denis SPI Powernet Pty Ltd T/A SP AusNet 491 Savige Douglas	486	Gorman	Brent & Harley	
489AgudoRobertoAcciona Infrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	487	Lipsys	Jonas	
489AgudoRobertoInfrastructure490McCrohanDenisSPI Powernet Pty Ltd T/A SP AusNet491SavigeDouglas	488	Turner	Denise	
Ltd T/A SP AusNet 491 Savige Douglas	489	Agudo	Roberto	
3 3		McCrohan		_
492 Kimm Geoff	491	Savige		
	492	Kimm	Geoff	

493	Komba	Hadia	
494	Cox	Dr John	
495	Hassell	John	
496	Southwell	Jo	Yarra Enviromental Sustainability Network
497	Barker	Neil	
498	Kelly	Andrew	
499	Siapikoudis	Peter	
500	Thong	Hee-Liew	
501	Doherty	Rebecca	
502	Harrington	Morgan	
503	Tonson	James	Understandascope
504	Williams	Dr Nicholas	
505	Champion	Barbara	
506	Volpe	Rohan	
507	Cummings	Karen	
508	Salisbury	Gwyneth	
509	Spear	Rose	
510	Roughana	Kevin	
511	Bunbury	Anna	
512	Carter	Sam	
513	Coote	Robyn	
514	Fooks	William	
515	Pentony	Anne	
516	Mortimer	Derek	Essendon Community Garden Inc
517	D'Alesio	Ricky	
518	D'Alesio	Belinda	
519	Redfearn	David	Friends of Merri Creek

520	Makin	Jen	
521	Judd	Valerie	
522	Dalli	Christopher	
523	McNamara	Helene	
524	Saunders	Andrew	
525	Baker	Drs Amy S. &	
		Scott	
526	O'Brien	Damien	
527	Liddy	Noela	
528			Friends of Moonee
			Ponds Creek Inc
529	A'Hearn	Meg	
530	Hughes	Rachel	
531	Fitzgerald	James	
532	Holmes	Anne	
533	Dunn	Eileen	
534	Wilkinson	Carole	Yarra Climate
			Action Now
			State MPs for
535	Garrett, Kanis MPs	Jane & Jennifer	Brunswick &
			Melbourne resp.
536	Hardwick	Benedict Tobin	Slater & Gordon
			Lawyers
537	Johnston	Egle	
538	Fox	Christopher	
539	Boutsinis	Christopher	
540	Ioannou	Omni	
541	Smith	Russell	
542	Withdrawn		
543	Steinfort	Tom, Paul &	
		Noela	
544	Roberts	Meaghan	

545	Benson	Tony	
546	Ellinghaus	Rainer	
547	-	-	University of Melbourne Baseball Club
548	Davies	Brig. Phil & Mrs Sandra	
549	Shanley	Monica	
550	Smith	Ramsay	
551	Barclay	Zoe & Benjamin	
552	Kanis MP	Jennifer	State MP for Greens
553	Cruise	Lachlan	
554	Welsh, Naish	Elizabeth & Kieren	
555	Palmer	Alice	
556	Champion	Barbara	Play Australia
557	Taylor	Janet	
558	White	Chris	The University of Melbourne
559	Thyer	James	
560	Logan	Peter & Joan	
561	Albiston	Craig	Melbourne University Rugby Football Club
562	Scott	Penelope	
563	Carroll	Maree	
564	Stiles	Pam	
565	Weir	Angela	
566	O'Connor	Gloria	Cardinia Ratepayers & Residents

			Association Inc.
567	Barnett	Steven	Yarra Bicycle Users
			Group
568	Milburn	Nicole	
569	Araneda	Francisca	
570	Metelman	Mark	
571	Koufariotis	Magda	
572	Heyes	Frank	Moonee Valley
			Sporting Club
573	Smail	Mrs Annie J	
574	Negus	Brian	Royal Automobile
			Club of Victoria
575	Analystis	Penelope	
576	Manuell	Dr Sally	
577	Roser	Paul	The National Trust
			of Australia
			(Victoria)
578	Rickards	Anne	
579	Marjoram	Professor Tony	
580	Menzies	Teresa	
581	Phillips	Dr Georgina	
582	Gherardin	Elizabeth Frances	
583	Canty	Carol	
584	Barker	Charlotte	
585	Howe	Jenny	
586	Lenaghan	Maggie	
587	Egli	Markus	
588	Day	Daniel	
589	Bandt	Adam	State MP for
303	Danut	Audili	Greens
		1	ı
590	Liddy	Noela	

592	Ervin-Ward	Gisela	
593	Zenaty	Marion	
594	Vowels	Robin	
595	Bullen	Andrew	
596	Јерр	Michelle	
597	Allpici	Lulzim	
598	Jha	Nikhil	
599	Rooding, McIntosh	Annamarie & Russell	
600	Jones	Cait	Public Transport Users Association
601	Nott	Lynne	
602	Nott	Alan	
603	Salathiel	Tim	ALC, AiG, IPA, MBAV, PCA, RACV, VACC, VECCI, VTA & UDIA
604	Sismanis	Sophie	
605	Maloney McCall	Stacey	
606	Merkel	Branca	
607	Brookes	Michael	
608	Day	Rhonda	
609	Raymond	Lee-Anne	
610	Shore	Malcolm K	
611	Hagger	Baden & Margaret	
612	Handsaker	Peter	
613	Vakras	Demetrios	
614	Melzatesta	Francis	
615	Falconer	Brian	
616	Hyam	Caitlyn	
617	Hore	lan	

618	Andrew	Neil	
619	Roche	Michael	
620	Christie	Robert	
621	Hannan	Lorna	
622	Hill	Jeremy	
623	Hiscock	Fiona	
624	Wansbrough	Dr Helen R	
625	Sheedy	Mavis	
626	Foundling	Cheryl	
627	Hall	Janet	
628	Iser	Cheryl	
629	Qin	Charles	
630	Confidential		
631	Hunt	Nichol	
632	Shnookal	Deborah	
633	O'Brien	Jennifer	
634	O'Connell	Dennis	Friends of Banyule
635	O'Connor	Bernadette	
636	Salmon	Gabriella	
637	Somers	Penelope	
638	Rawlins	Jeremy	
639	Zika, Loh	Ben & Joe	Royal Park Reds Cricket Club
640	Polesel	John	
641	Pathmanandavel	Sukumar	Coffey International Pty Ltd
642	Firkin	Wendy	
643	Marcus	Christian	
644	Cook	R	Inner Northern Suburbs Residents Association

645	Dominica	Tannock	Protectors of Public
			Lands Victoria Inc
			& Royal Park
			Protection Group
			Inc
646	Tesfay	Fireweyni	Youth Nights
647	Confidential		
			Bouygues
648	Green	Ritchie	Construction
			Australia Pty Ltd
649	Confidential		
650	Magnusson	Lisa	
651	Potts	Julie	
652	Dickie	John	
653	Brown	Jennifer	
654	Confidential		
655	Farrah	Tim	
656	Chan	Caesar	
657	Dyring	Charles	
658	Pill	John	
659	Treleaven, Main	Jane & Michael	
660	McAleese	Elizabeth	
661	Attwood	Rhonda	
662	Jokic	Vera	
663	Del Signore	Adele	
664	Oppenheim	Dr Richard &	
		Annette	
665	Marchant	David	Lend Lease
003	iviai Ciiaiit	Daviu	Engineering Pty Ltd
666	Goldsworthy	Rachel	
667	Derriman	Kim	
668	Chong	Soo	

669	Scott	Nina	
670	Nataprawira	Roslyn	
671	Abela	Rachel	
672	Dragicevic	George	
673	Keller	Philip	
674	Lamb	Brent	
675	Dare	Anthony	
676	Fraser	John	
677	Ingamells	Adam	
678	Anderson	Karyn	
679	Bullen	Andrew	Melbourne University Soccer Club
680	Rudge	Santana & Justin	
681	de Vietri	Laurel	
682	Potts	Les	Flemington Association Inc
683	Krivanek	Rosamund	
684	Sheko	Alexander	Students Linking Melbourne Sustainability
685	O'Reilly	Lorraine A	
686	Hogg	Peter	Residents About Integrated Development @3051
687	Greco	Cr Gaetano	Darebin City Council
688	Denmead	Stewart	
689	Foley, Sowerwine	Susan & Charles	
690	Coyne	Tim	
691	Murtagh	Damian	

692	Huth	Alister	
693	O'Hanlon	Clare	
694	Corcoran	E. Helen	
695	Cook	Bill	
696	Dickinson	Hannah	
697	Lindsay	Carrie	
698	Leitinger	Jane	
699	Roy	John	
700	Roy	Janice	Fowlers Vacola Australia P/L
701	Philipp	Kristine	
702	Johnstone	Liz	Planning Institute of Australia
703	Pollock	Alex	
704	Cosson	Karen	
705	Jolic	Anne	
706	Noonan	Paul	
707	Rizio	Dario & Chris	
708	Smith	Phillip	
709	Wallace	R J	
710	Farrow	David	Boroondara Bicycle Users Group
711	Liefman	Jane	
712	Lancaster	Bryan	Moonee Valley City Council
713	Gartner	Clive	
714	Roberts	Kenneth	
715	Wager	John	
716	Wager	Janet	
717	Croci	Josephine	
718	van de Wiel	Remy	
719	Scott	Trevor	

720	Lin	David	
721	Fitzgerald	Keith	
722	Phelan	Robyn	
723	Bartlett	Rodney	
724	Hughes	Richard Anthony	
725	Tsingas	Constantine	
726	Harrington	Duncan	
727	Dunn	Bernard	
728	Stone	Dr John	Urban Planning Program, University of Melbourne
729	Bell	Kristen	
730	Hay	Patrick	
731	Hay	Harry	
732	Hay	Bill	
733	Drummond	Pat	
734	Burrell	Kim	
735	Hoban	Anne	
736	Mackay	Graham A	
737	McMahon	Ann	
738	Foundling	Michael	
739	Dickinson	Gary & Christine	
740	Howie-Hickmott	Ann	
741	Kennedy	Katherine	
742	Byrne	Peter & Maria	
743	D'Menzie	Marcellene	
744	Kennedy	Gregor	
745	Miller	Noel	
746	Lance	Stephen	
747	Aranha	Albert	
748	Lew	Michael J	

749	Findley	Ann	
750	Miskella	Tom	
751	Horsford	Ro	
752	Confidential		
753	Zenaty	Cheryl	
754	Parkes	Shirley	
755	Widmer	John	
756	Clemens	Ruth	
757	Chooi	Tech Sun	
758	McIntyre	Philip N	
759	DeRango	Melissa	
760	Philip	Dr Pradeep	Department of Health Victoria
761	Alomes	Adjunct Prof. Stephen	
762	Finger	Margaret & Bill	
763	Palmer	1	
764	Sciacchitano	Josie & Bob	
765	Ciavarella	Anna	
766	Paranavitane	Channa	
767	Croft	Terry	
768	Stannus	Gabrielle	
769	Howes	Dorothy	
770	Petersen	Beverley	
771	Deasey	Sarah	
772	Fetherstonhaugh	Amelia	
773	Cook	Scarlett	
774	Corrie	Alexander Benjamin	
775	Putker	Steph	
776	Miller	Panayota	
777	White	Anna	

778	Brunning	Kathy	
779	O'Neill	Christopher	
780	O'Neill	Caroline	
781	Lechte	Toni	
782	Norquay	Fiona	
783	Arndt	Judith	
784	Masterman	Lindis	
785	Griffith	Julia	
786	Fenelon	Mary Ellen	
787	Ward	Michael	
788	Rowland	Karen	
789	O'Neill	Anne	
790	Jones	Dr M R	
791	Ritchie	Kate	
792	Nguyen	Tram	
793	Howes	Michael	
794	Rhodes	Katharine	
795	Harvest	Jane	
796	Aldrick	Robyn	
797	Murphy	Anthony	
798	Sharp	Heather R	
799	Scheurer	Dr Jan	
800	Gwyther-McCuskey	Merlyn	
801	Clarkson	Georgia	
802	Koppel	Jill	
803	Zovko	Andrija	
804	Dunlop	Hannah	
805	Kelly	Siobhan	
806	Jenkins	Charles	
807	Hanna	David	
808	Kahsay	Semere	Youth Nights - Girls
809	Duxbury	Kenneth	

810	Sande	Anna
811	Sherpherdley	Bruce
812	Ansell	Kay
813	Broadhurst	Vivienne
814	Abernethy	Leigh
815	Wood	David
816	McKinnon	Mark
817	Strantzen	Denyse
818	Strantzen	Peter
819	Thomas	Catherine
820	Thomas	Valerie
821	Mamunya	Xanya
822	Leonard	Kirk
823	Walker	Peter
824	Macfarlan	Alice
825	Jessop	Cath
826	Tonkin	Matilda
827	Kahan	Dena
828	Silverman	Julian
829	Hunter	Alistair
830	Bowers	David
831	Wratten	Geoffrey S
832	Stafford	Tom
833	Withdrawn	
834	McKeown	Dion
835	Prentice	Paul D
836	Noonan	Gerald
837	Hookey	Enid
838	Wallace	Lynette
839	Batley	Amber
840	Lechte	Graeme
841	Collin	Denise

842	Christophers	Anne	
843	Hosking	Peter	
844	Bates	Llewella	
845	Mason	Lucinda	
846	Hughes	Keegan	
847	Ellwood	Sarah	
848	Jakobsen	Lene	
849	Jacka	Meredith	
850	Skinner	Carol	
851	Strong	Simon	
852	Goguillon	Brune	
853	Heffernan	Tamara	
854	Zovko	Eva	
855	Naismith	Michael	
856	Treager	Lynley	
857	Crooke	Marion I	
858	Thomson	Maximilian	
859	Watkin	Freda	
860	Harua	Alfred S	
861	Meagher	Rosemary	
862	Chia	Lee	
863	Carmody	Clare	
864	Forester	Melissa	
865	Zoric	Lauren	
866	Stephens	Jenny	
867	Minogue	Andy	
868	Agar	Alison Shelton	
869	Foster	Patricia	
870	Chen	(Edith) SC	Flemington Chinese Golden Age
871	Mathew	Heather R	
872	Lagzdin	Eduard	

873	Bell	John	
874	Brown	Helen	
875	Araneda	Domingo	
876	Ung	Sok Eng	
877	Haynes	Ann	
878	Confidential		
879	Chen	Shaio-Chi	
880	Yie	l Lan	
881	Image	Lindsay	
882	Moroney	Brian	
883	Burns	Michelle	
884	Finlayson	М	
885	Baso	Andi S	
886	Ride	Carol	
887	Mahar	Caitlin	
888	Kacala	Elizabeth	
889	Nicholls	Tony	
890	Seterdal	Bente	
891	Onus-King	Kelvin	
892	Pantazopoulos	Olga	
893	Zeevaarder	Lynette	
894	Palmer	lain	
895	Lester	Prue	
896	McGarvie	Andrew	
897	Rolfe	Margaret	
898	Cross	Amy	
899	Peverell	Geoff	
900	Lim	Tran H	
901	-	-	City of Yarra
902	Lawler	Geoff	City of Melbourne
903	Griffin	Lyn & Paul	
904	Hardy	John	

905	Hewitt	Robyn	
906	Saint	John Michael	
907	Murley	Megan	Clifton Hill Primary School
908	Marshall	Carol	
909	Kayser	Deborah	
910	Confidential		
911	Araneda	Mauricio	
912	Sumner	Jason	Apex Town Planning - for Schots Home Emporium
913	Scott	Robert	
914	Dobson	Bruce	City of Boroondara
915	Saxon	Kylie	
916	Scherder	Isolde	
917	Marchionna	Mirella	
918	O'Loughlin	Patricia	
919	Zovko	Marina	
920	Eason	Nina & Bob	
921	Confidential		
922	Lee	Gwen	
923	Brown	Dr Malcolm	
924	Phandanouvong	Khamsane	
925	Nguyen	Chinh	
926	Nguyen	Mai Anh	
927	Nguyen	Van Anh	
928	Huynh	Truc	
929	Mui Duong	Cun	
930	Osman	Nfissa	
931	Ibrahim	Salah	
932	Malik	Mariem	

933	Ibrahim	Arhet	
934	Ibrahim	Salma	
935	Ali	Haman Mohammed	
936	Ahmed	Tarek	
937	Eshte	Niqist	
938	Alayu	Alemtsehay	
939	Grant	Gerard	
940	Drummond	Cathy	
941	Lauria	Angela	
942	Keel	Thomas	Fitzroy Residents Association
943	Clarke	Phillip	
944	Wilson	Paula	
945	Madden	Angela	
946	Stainsby	Bernadette	
947	Mullarvey	Annie Deirdre	
948	Ortega	Vivienne	
949	Whaley	Keith	
950	Pinan	Michelle	
951	Rafferty	Edel	
952	Blackman	Ken	
953	O'Hara	Vern Andrew	
954	Lloyd	Pamela	
955	Wyeth	Trish	
956	Nicoll	Mac	
957	Bell	John	
958	McClusky	Sarah Louise	
959	Southby	Justine	
960	Wookey	Ann	
961	Moore	Pauline & Muriel	
962	Gunner	Andrew	

963	Pennings	Tamara	
964	Lavender	Jeremy	
965	Fernando	Ruwani	
966	Elliott	Rosemary	
967	Confidential		
968	Nankervis	John	
969	Watmough	Paul	
970	McClusky	Kathleen	Hobsons Bay City Council
971	Confidential		
972	Powell	Miriam	
973	DiLallo	Raffaello	
974	deWit	Shane	
975	Ryan, Mealor	Reannon & Andrew	
976	Robinson	Philip	
977	Williamson	Kathryn	
978	Nolan	Ross	Confidential
979	Hille	Peter	
980	Strating	Corinn	
981	Yates	Nicholas	
982	Quinn	Shannon	
983	Quijano	Emilia	
984	Villella	Robert	
985	Huva	Denise	
986	Chambers	Lyndal	
987	Dullard	Jeremy	
988	Ма	Andrew	
989	Taylor	Pnina	
990	Urban	Maria	
991	Liu	Mika	
992	Francis	Julie	

993	Read	Leannda	
994	Croeser	Thami	
995	Hansper	Vera	
996	Pern	Kate	
997	Weisfelt	Peter	
998	Beuchat	Daniel	
999	Crellin	Brittney	
1000	Hormann	Peter	
1001	Chiew	Angela Ashley	
1002	Grigg	Tamara	
1003	Damnics	Melissa	
1004	Handley	John	
1005	George	Andrew	
1006	Rossner	Matt	
1007	Rees	Keith	
1008	Smithyman	Dale	
1009	Chadderton	John	
1010	Haydon	Blair	
1011	Hartland	Colleen	Greens MP
1012	Kelly	Andrew	
1013	Morris	Christine	
1014	Gillies	Greta	
1015	Miller	Stephen	
1016	Rigg	Peta	
1017	Fried	Margaret	
1018	Stivens	Maila	
1019	Siska	Lorraine	
1020	Pritchard	Evan	
1021	Rudner	Julie	
1022	Hedger	Brett	
1023	Wright	Karen	
1024	Confidential		

1025	Ray	Eile	
1026	Watson	Catherine	
1027	Burgess	Deborah	
1028	Vivian	Sally	
1029	Russell	Simon	
1030	Chester	Craig	
1031	Costanzo	Adrienne	
1032	Said	Aimee	
1033	Macintyre	Martha	
1034	Crowther	Melanie	
1035	Grasso	Suzanne	
1036	Confidential		
1037	Brew	Gillian	
1038	Thomas	Josie	
1039	Dodd	Geoffrey	
1040	Sprunt	Beth	
1041	Shepherd	Dalene Mary	
1042	Casey, van Leeuwen	Sue & Peter	
1043	Threlfall	Bill	Essendon Hockey
1044	Hamantan	Country	Management
1044	Hempton Mullins	Courtney	
1045		Anne	
1046	Soanes	Rebekah	
1047	Blustein	Shifrah	
1048	\ \ \ / \ \ : \ \ = \ \ +	Cusana	
1040	Wright	Susanne	
1049	Lynn	Joan	
1050	Lynn Lindsay	Joan Glenda	
1050 1051	Lynn Lindsay Dalla	Joan Glenda John	
1050 1051 1052	Lynn Lindsay Dalla Berzins	Joan Glenda John Karen	
1050 1051 1052 1053	Lynn Lindsay Dalla Berzins Gwosdezki	Joan Glenda John Karen Sonja	
1050 1051 1052	Lynn Lindsay Dalla Berzins	Joan Glenda John Karen	

1056	Withdrawn		
1056	Havir	Michael	
1058	Martin	Sahra	
1059	Lafleur	Dimitri	
1060	McClelland	Darren	
1061	Confidential		
1062	Elliott	Lucy	
1063	Whitaker	Heather	
1064	Brooks	Geraldine	
1065	Kelly	Jane	
1066	Swilo	Aleks	
1067	Smith	Colin	
1068	Darlington	Melissa	
1069	Isaac	Dr David	
1070	Brady	T.S.	
1071	Ride	John	
1072	O'Sullivan	Patrick	Urban Camp Melbourne Co- operative Ltd
1073	Ellinghaus	Carli	
1074	Campbell	Kirsten	
1075	Healy	Geoffrey & Mary	
1076	Finch	Maggie	
1077	Clarke	Alison	Clifton Hill Child & Adolescent Therapy Group
1078	Matina	Anna	
1079	Hone	Christopher	Royal Park sport Inc
1080	Robinson	Brett	
1081	Ellinghaus	Alric	
1082	Dobbinson	Suzanne	
1083	Dredge	Alison	

1084	Corbet	Richard	
1085	Harms	Anton	
1086	Mazur	Michael	
1087	Ryrie	Fay Eileen	
1088	Calwell	Dr Mary-Elizabeth	
1089	Kenny	Marilyn	
1090	Price	Daniel	
1091	Bawden	Graeme Charles	
1092	Smith	Tony	Moonee Ponds Creek Co- ordination Committee
1093	Pannu	Meegan Ellis	
1094	Dwyer	Rohan	
1095	Hill	Simone	
1096	Rash	Lucy	
1097	Merewether	Anthea	
1098	Smallman	Tom	
1099	Norton	Sarah	
1100	Christensen	Ellie	
1101	De Luise	Michael	
1102	Beckton	Gerald	
1103	McCallum	Kathryn	
1104	Clancy	Rob	
1105	Down	Gavin C.	
1106	Phefley	David	
1107	Petinatos	Jennifer	
1108	Cairnes	Colin	
1109	Sarson	Megan	
1110	Tam	Mei	
1111	Northeast	Simon	
1112	Stanyon	Clem	

1113	Sinclair	Tristan	
1114	McInnes	Maggie	
1115	Bilby	Scott	
1116	O'Shea	Rosemary	
1117	Hooper	Brad	
1117	Cameron		
		Judy	
1119	Ingleton	Roxane	
1120	Driscoll	Kate	
1121	Geradts	Karin	
1122	Vertigan	chris	
1123	Davis	Holly	
1124	Madden MP	Justin	Member for
			Essendon
1125	Jennings	Kerry	
1126	Lichtenstein	Benjamin	
1127	Pizzey	David	
1128	Graham	Heather	
1129	Hogg	Annetter	
1130	Galvin	Pauline	
1131	Southby	Robert & Olivia	
1132	Kotzman	Anne	
1133	Bolanos	Carolina	
1134	Robertson	Jessica	
1135	Collins	Kristy	
1136	Gooden	Chris	
1137	Adams	Paul	
1138	Campbell	Neil	
1139	Robertson	Geraldine	
1140	Gledhill	Patritica	
1141	Gleeson	Thomas	
1142	Wall	Katherine	
1143	Slinger	Paul	

1144	Barrett	Jeanette
1145	Scaffidi	Antonietta
1146	Withdrawn	
1147	Watts	Anna
1148	Haley	Lisa
1149	White	Doug
1150	Vella	Peter
1151	Ensor	Bruce
1152	Parsons	Ron
1153	Pennington	Steve
1154	Doe	David
1155	Brangwyn	Julia
1156	Sheppard	Jessica
1157	Lee	Sharon
1158	Jones	Greg
1159	Jeffery	Andrew
1160	Daley	Alexandra
1161	Affleck	Max
1162	Ahern	James
1163	Cohen	Samantha
1164	Sydenham	Nicole
1165	Palk	Emily
1166	Thomas	Kate
1167	Oberg	Ranveig
1168	Wilkinson	James
1169	Stephen	Sarah
1170	Harris	David
1171	Bird	Helen
1172	Thom	Alexander
1173	Pettifer	Kate
1174	Childe	Rose
1175	Berry	Claire

		147
1176	Berry	Wayne
1177	Edwards	Monique
1178	Wraight	Lauren
1179	Ormonde	Jane
1180	Bashford	Elizabeth
1181	Warburton	Julie
1182	Alexander	Claire
1183	Hedditch	John
1184	Pizzorno	Bianca Maciel
1185	Kennedy	Esther
1186	Bulic	Stephanie
1187	Young	Jill
1188	O'Carrigan	Simon
1189	Mansfield	Neil
1190	Wyndom	Noel
1191	Premkumar	Vellore
1192	Settle	Domenica
1193	Shepherd	Claire
1194	Walsh	Jack
1195	Nahed	Phillip
1196	Nahed	Winifred
1197	Sargent	Gemma
1198	Shaw	Benjamin
1199	Powell	Liz
1200	Swayn	Benjamin
1201	Burnham	Nathan
1202	Smith	Tania
1203	Beaumont	Anna
1204	Beaumont	Jeremy
1205	Whelan	Brent
1206	Stammers	Tom
1207	Castaldo	Peter

1208	Temple	Rebecca
1209	Hooppell	Carl
1210	Weldon	John
1211	Conlan	James
1212	Kalaiya	Nisarg
1213	Bowman	John
1214	Jung	Gaby
1215	Shanahan	Sophie
1216	McPherson	Kathleen
1217	Smith	Nicholas
1218	Wallace	Elisabeth
1219	Davis	Felix
1220	McNaught	Roz
1221	Stanisic	Michael
1222	Begovic	Joanne
1223	McPherson	Mark
1224	Sands	Alicia
1225	Joyce	Nikki
1226	Himbury	Maelor
1227	Henry-Jones	Eliza-Jane
1228	Hibbs	Ben
1229	Tanrikut	Ozge
1230	McIntyre	Beverley
1231	Rae	Clare
1232	McCulloch	Lilliah
1233	Clanachan	Alice
1234	Wood	Melinda
1235	Griffin Clark	Felicity
1236	Patchett	Lucy
1237	Yu	Ping
1238	Meng	Vivi
1239	Hajdu	Frank

1240	Nana	Natalie
1241	Stead	Sally
1242	Robertson	Finn
1243	Leggatt	Tom
1244	Young	Gordon
1245	Davey	Bethany
1246	Bravos	Louis
1247	Munari	Ellie
1248	Wilson	Narelle
1249	Morrison	Andrew
1250	Fish	Bill
1251	Lu	Chin
1252	Marginson	Sam
1253	Smee	Peter
1254	Hammond	Joe
1255	Johnston	Andrea
1256	Zovko	Ivan
1257	Wilson	Angus
1258	Dekok	Cornelius
1259	Renowden	Felicity
1260	Swales	Penelope
1261	Madgwick	Josh
1262	Parkinson	Barbara
1263	Cowan	Bev
1264	Wright	Christine
1265	Mathew	Rob
1266	Lacey	Jane
1267	Dee	Dovey
1268	Bloxom	Kay
1269	Glaisher	Rosemary
1270	Chandley	Teresa
1271	Dunne	Russell

1272	Angelopoulos	Kristy	
1273	Johnson	Fay	
1274	Ashdowne	Lisa	
1275	Gould	Naralia	
1276	Pavey	Trixie	
1277	Bambridge	Greg	
1278	Freeman	Julia	
1279	Howland	Mark	
1280	Love-Dack	Α	
1281	Evans	Bianca	
1282	Birch	Hayden	
1283	Feely	Eliza	
1284	Lewis	Gabriel	
1285	James	Simon	
1286	Williams	Pauline	
1287	Keem	Norelle	
1288	Kouvaras	Linda	
1289	Young	Merryn	
1290	May	Wayne	
1291	Carli	Carlo	Brunswick Zebra Football Club
1292	Chandra	Bhavna	
1293	Smith	Ben	
1294	Bourke	Roslynne	
1295	Ellis	Caitlyn	
1296	Collard	Peita	
1297	Farrugia	Matthew	
1298	Campbell	Ryan	
1299	van den Nieuwenhof	Amy	
1300	Bond	Phoebe	
1301	Cunningham	Pam	
1302	Bergsdorf	Claudia	

1303	Moscovitch	Jackie
1304	Ross	Eloise
1305	Field	Mandy
1306	Magree	Jaclyn
1307	Richmond	Rachel
1308	Greiner	Arnold
1309	Walker	Adrienne
1310	Clemente	Maryane
1311	Wigg	Sarah
1312	Reid	Gordon
1313	Lupone	Joe
1314	Lindner	Justin
1315	Foster	Jeannie
1316	Montgomery	lan
1317	Musil	Dan
1318	Bailey	Allie
1319	Treadwell	Greg
1320	Faull	Amy
1321	Moysey	Stuart
1322	Bolduan	Emily
1323	Lightfoot	Stephen
1324	Blight	Taryn
1325	Taylor	Richard
1326	Dawes	Alice
1327	Kline	Alex
1328	Jungalwalla	Kimberley
1329	Moore	Clancy
1330	Pham	Kim
1331	Wani	Saheem
1332	Mok	Fei
1333	Pennacchia	Paolo
1334	Chan	Stephanie

1335	Butcher	Nikki
1336	Reiss	Nicola
1337	Freeland	Ava
1338	Chadwick	Remy
1339	Barrett	Suzie
1340	Pett	Akash
1341	Dwyer	Sally
1342	Townsend	Craig
1343	McDermott	Angela
1344	Prideaux	Alex
1345	Buck	Miranda
1346	Suelzle	Sophie
1347	Fine	Naima
1348	Petterson	Michelle
1349	Bertram	Hannah
1350	Watkins	Ashlee
1351	Soccio	Philippa
1352	Stutterheim	Cath
1353	Gould	Mark
1354	Lenko	Eytan
1355	Edgar	Trelawney
1356	Catherall	Janice
1357	Musil	Dan
1358	Sy	Herbert Velasco
1359	Sy	Liza
1360	Kleinmaker	Ellen
1361	Denborough	Liz
1362	Cassidy	Meran
1363	Kos	Karin
1364	Harris	Oliver
1365	Sheridan	Tristarnya
1366	Mordue	Cherie

1367	Tyson	Esme
1368	Jefferson	David
1369	Farren	Anne-Louise
1370	Smith	Kylie
1371	Miron	Annee
1372	Rizzo	Tom
1373	Hicks	Harry
1374	Woods	Jade
1375	Summers	Elliot
1376	Davine	Richard
1377	Abed	Maha
1378	Frederick	Paul
1379	Balfour	Erin
1380	Doyle	John
1381	Chambers	Fleur
1382	Bishop	Tania
1383	Ross	Greg
1384	O'Dwyer	Dominic
1385	Delacretaz	Tyler
1386	Philipp	Vicki
1387	Cooper	Marie-Anne
1388	Fogaty	Thomas
1389	Dellal	Zerin
1390	Townsend	Amanda
1391	Potter	Mick
1392	Howes	Elizabeth
1393	Shoduri	Soner
1394	Storm	Caroline
1395	Riseley	Kerryn L
1396	Kinrade	Steve
1397	Gook	Ben
1398	Yupangco-Elloso	Monica

		Antoinette	
1399	Edwards	Grace	
1400	Buck	Jonathan	
1401	Sommer	Kristofer	
1402	Fairman	Tom	
1403	Davidson Gluyas	Sophia	
1404	Burnham	Tabitha	
1405	Grant	Angus	
1406	Lewis	Nigel	
1407	Browning	Marilyn Gaye	
			Princes Hill North
1408			Carlton Heritage
	Anwyl	Jill	Network Inc.
1409	Smelter	Danielle	
1410	Thomas	Warwick	
1411	Connor	Rachel	
1412	Newnham	Karina	
1413	Storey	Rohan	
1414	Speechley	Soon Tzu	
1415	Forman	John	
1416	Bull	Caitlin	
1417	Carroll	Dominic	
1418	Anthony	Diana	
1419	Turnbull	James	
1420	Bell-Merrick	Kerrianne	
1421	Withdrawn		
1422	Common	Penny	
1423	Fletcher	Michael & Tania	
1424	Chapman	Marion	
1425	Rybicki	Julitta	
1426	Frawley	Nola	
1427	Dunne	Ian, Suzanne, &	

		Rebecca	
1428	Schinkel	Maurice	
1429	Holden	Judy	
1429	O'Neill	Kerry	
1430	Brown	Jessica	
1431	DIOWII	Jessica	Australian Garden
1432			
1433	Withdrawn		History Society
1433	Amarant	Managarat	
	7 11 11 11 11 11 11	Margaret	
1435	Clelland Gray	Pamela	II M.L.I.
			Heavy Vehicle
4.426			Drivers of
1436	Al. J. II. I	-	Melbourne
1437	Abdellah	Hayat	
1438	Barker	Bridget	
1439	Barker	Geordie	
1440	Bourke	Peter	
1441	Callister	Geraldine	
1442	Chapman	Robert	
1443	Condie	Judith	
1444	Foote	Russel	
1445	Dorizzi	Terry	
1446	Withdrawn		
1447	Withdrawn		
1448	Greig	Adam	
1449	Helme	Beryl	
1450	Hirtzel	Greg	
1451	Withdrawn		
1452	Leeman	Ben	
1453	Mitchell	Michelle	
1454	Mitchell	Andrew	
1455	Withdrawn		

1456	McGravie	Ross
1457	Mahmoud	Ehsan
1458	Withdrawn	
1459	O'Hoy	Anne
1460	Price	John
1461	Paleologoudias	Fay
1462	Plarre	Bronwyn
1463	Perclaer	Megan
1464	Polis	Ann
1465	Robertson	Kimberley
1466	Ruwhm	Howard
1467	Ryan	Colin
1468	Rode	Margaret
1469	Withdrawn	
1470	Ross	lan
1471	Silke	John
1472	Withdrawn	
1473	Spalding	Nikki
1474	Sharp	Marcus
1475	Withdrawn	
1476	Wescott	Geoffrey
1477	Temple	Rhiannon

Appendix C: Hearing Document List



PRELIMINARY HEARING:

Tuesday 14 January 2014

Document No.	Description	Tabled by
1	East West Link Assessment Committee : Request for information under Section 57(4) of the Act (13 January 2014)	Assessment Committee
2	Information request from the City of Melbourne	Ian Pitt SC for Melbourne
3	East West Link – Preliminary hearing matters	Michael Ingram
4	Letter to Chair of Assessment Committee (10 January 2014)	Andrew Herington
5	Letter to Chair of Assessment Committee (13 January 2014)	Gordon Ley

PUBLIC HEARINGS:

DAY 1 Monday 3 March 2014

Document No.	Description	Tabled by
6	Conclave Statement – Groundwater	Stuart Morris QC for LMA
7	Conclave Statement – Social	Stuart Morris QC for LMA
8	Conclave Statement – Historical Heritage	Stuart Morris QC for LMA
9	Conclave Statement – Noise and Vibration	Stuart Morris QC for LMA
10	City of Melbourne Opening Submission	Ian Pitt SC for City of Melbourne
11	City of Melbourne Preferred Performance Requirements	Ian Pitt SC for City of Melbourne
12	Yarra City Council Opening Submission	Adrian Finanzio SC for Yarra City Council
13	City of Moonee Valley Opening Submission	Louise Hicks for Moonee Valley City Council
14	Community Groups Opening Submission (Parts A & B)	Tom Pikusa
15	Submitter Locations (22 sheets)	Stuart Morris QC for LMA

DAY 2 Tuesday 4 March 2014

Document No.	Description	Tabled by
16	Supplementary Submission – Terry Croft	Terry Croft
17	Andrew Herington letter – 4 March 2014	Andrew Herington
18	EPA Clean-Up Notice	Katy McGuinness for EPA
19	EPA Opening Submission	Katy McGuinness for EPA
20	Arden-Macaulay Structure Plan	Ian Pitt SC for City of Melbourne
21	Objections by Yarra City Council - General	Adrian Finanzio SC for Yarra City Council
22	Objections by Yarra City Council - Pelosi	Adrian Finanzio SC for Yarra City Council
23	Outline of Opening Submission on behalf of LMA	Stuart Morris QC for LMA
24	Desalination Project Incorporated Document	Stuart Morris QC for LMA
25	Peninsula Link Incorporated Document	Stuart Morris QC for LMA
26	Regional Rail Incorporated Document	Stuart Morris QC for LMA
27	City Link Project Overlay	Stuart Morris QC for LMA
28	Conclave Statement - Biodiversity	Stuart Morris QC for LMA
29	Conclave Statement - Air Quality	Stuart Morris QC for LMA
30	Conclave Statement - Traffic / Transport and Road Design - Parts A and B	Stuart Morris QC for LMA
31	Transport Good Design – Office of Victorian Government Architect	Nick Tweedie SC for LMA
32	Appendix S7 – Urban and Landscape Design	Nick Tweedie SC for LMA
33	Appendix A7 – Urban and Landscape Design	Nick Tweedie SC for LMA
34	Melbourne Planning Scheme Extracts and VCAT Rulings	Nick Tweedie SC for LMA

DAY 3 Wednesday 5 March 2014

Document No.	Description	Tabled by
35	Submission regarding powers of East West Assessment Committee	Andrew Herington
36	Letter responding to LMA opening submission	Gordon Ley
37	Summary of expert evidence – Veitch PowerPoint presentation	Mike Veitch
38	2013 Veitch Lister Base Case Development (G1 scenario)	Nick Tweedie SC for LMA
39	Pelosi response to other expert reports	Nick Tweedie SC for LMA
40	Summary of expert evidence of Pelosi – PowerPoint presentation	Nick Tweedie SC for LMA
41	Brock comment on expert reports of others (replaced)	Nick Tweedie SC for LMA

DAY 4 Thursday 6 March 2014

Document No.	Description	Tabled by
42	Brock PowerPoint presentation	Nick Tweedie SC for LMA
43	Figure C - viaduct image provided by Peyton of SNRP	Chris Wren SC for AC on behalf of Anthony Peyton
44	Traffic Count Points in Alexandra Parade (Map)	Nick Tweedie SC for LMA
45	Expert Witness Template (LMA) – Peer Review Version	Nick Tweedie SC for LMA
46	Extract from <i>Transport Integration Act 2010</i>	Chris Wren SC for AC
47	Preliminary Consolidated Advice on Expert Evidence from Bennet to Assessment Committee	Assessment Committee Chair
48	Expert Witness Template (LMA) – CIS Author Version	Stuart Morris QC for LMA

DAY 5 Friday 7 March 2014

Document No.	Description	Tabled by
49	Clarification of Committee's Request for Information	Stuart Morris QC for LMA
50	Stoettrup PowerPoint presentation	Stuart Morris QC for LMA

Document No.	Description	Tabled by
51	Extract from Official Website of the Diverging Diamond Interchange	Adrian Finanzio SC for Yarra
52	Extract from Federal Highways Administration (US) – Alternative Intersections/Interchanges: Informational Report (AIIR)	Adrian Finanzio SC for Yarra
53	SGS Report: Long run economic and land use impacts of major infrastructure projects July 2012	Stuart Morris QC for LMA
54	Wyatt PowerPoint presentation	Stuart Morris QC for LMA
55	Preliminary Urban Design Principles	Stuart Morris QC for LMA
56	Stoettrup PowerPoint presentation	Stuart Morris QC for LMA
57	Department of Transport, Job density, productivity and the role of transport June 2012	Rupert Watters for Yarra
58	Response to EMF not including Social and Business Impacts not Included	Stuart Morris QC for LMA
59	Alexandra Parade Traffic Volumes (replacement 44)	Stuart Morris QC for LMA
60	Convergence Results from Zenith Model	Nick Tweedie SC for LMA
61	Zenith Model Sensitive Tests undertaken by VLC	Nick Tweedie SC for LMA
62	Enlargement of Slide 7 from Brock Presentation	Nick Tweedie SC for LMA
63	PowerPoint Slides from LMA Opening	Stuart Morris QC for LMA

DAY 6 Tuesday 11 March 2014

Document No.	Description	Tabled by
64	Urban Circus clarification of measured heights in 3D Model provided during Urban Circus model fly-through	Stuart Morris QC for LMA
65	Hay PowerPoint presentation	Barnaby Chessell for LMA
66	Comments on Surface Water Aspects of Statements by Shears and Webb	Barnaby Chessell for LMA
67	Letter from Lane to Clayton Utz re Vegetation in Moonee Ponds Creek	Barnaby Chessell for LMA
68	Clause 52.17 of Melbourne Planning Scheme	Barnaby Chessell for LMA
69	Lane PowerPoint presentation	Barnaby Chessell for LMA

Document No.	Description	Tabled by
70	Response by Lovell to other Heritage experts	Nick Tweedie SC for LMA
71	Lovell PowerPoint presentation	Nick Tweedie SC for LMA
72	Response to Assessment Committee request for traffic inputs to Noise Model	Nick Tweedie SC for LMA

DAY 7 Wednesday 12 March 2014

Document No.	Description	Tabled by
73	Letter 11 March 2014, Re: Alternatives to Hoddle Street Overpass	Andrew Herrington
74	Royal Park Regulations, RS5242, 1204333, 26 September 1934	Ian Pitt SC for Melbourne
75	Proposed East West Link Possible Interchange at Flemington Road Instead of Elliott Avenue: Design Considerations	Ian Pitt SC for Melbourne
76	Fearnside PowerPoint presentation	Nick Tweedie SC for LMA
77	Review of Expert Reports by Fearnside (Noise)	Nick Tweedie SC for LMA
78	Clause 13.04, Victoria Planning Provisions	Chris Wren SC for AC
79	Extracts from A Guide to the Reduction of Traffic Noise, For use by Builders, Designers and Residents, 2003	Chris Wren SC for AC
80	NSW Road Noise Policy, March 2011	Chris Wren SC for AC
81	VicRoads Noise Policy, Undated but said to be 2005	Nick Tweedie SC for LMA
82	Heilig PowerPoint presentation	Nick Tweedie SC for LMA
83	Heilig, Correspondence dated March 5, 2014: Comments on other expert reports	Nick Tweedie SC for LMA
84	Heilig, Correspondence dated March 10, 2014: Initial review of Flagstaff Consulting Report	Nick Tweedie SC for LMA
85	A3 Diagram of Tunnel Boring Machine, Well Connected Alliance, Undated	Chris Wren SC for AC
86	Nadebaum, Correspondence dated 12 March 2014: Response to Flagstaff Consulting Report	Barnaby Chessell for LMA
87	Nadebaum, Correspondence dated 12 March 2014: Response to Evidence of Professor Webb	Barnaby Chessell for LMA
88	Nadebaum, Correspondence dated 12 March 2014: response to EPA submission	Barnaby Chessell for LMA

Document No.	Description	Tabled by
89	Nadebaum PowerPoint presentation	Barnaby Chessell for LMA
90	Anderson, Correspondence dated 12 March 2014: Response to Flagstaff Consulting Report	Barnaby Chessell for LMA
91	Anderson PowerPoint presentation	Barnaby Chessell for LMA
92	Anderson response to EPA submission	Barnaby Chessell for LMA
93	Revised LMA Answer to Question 21 of the S57(4) Report	Stuart Morris QC for LMA
94	Response to Assessment Committee Questions Arising from Document 59	Stuart Morris QC for LMA

DAY 8 Thursday 13 March 2014

Document No.	Description	Tabled by
95	Patrick PowerPoint presentation	Nick Tweedie SC for LMA
96	Nesbitt PowerPoint presentation	Stuart Morris QC for LMA
97	Public Response to Expert Material – Social (Nesbitt)	Stuart Morris QC for LMA
98	Extract of <i>Investing in Transport</i> , Eddington Study, 2008	Rupert Watters for Yarra
99	East West Link Needs Study, Demographic , Social and Land Use Analysis, Phase 1 Background Research, SGS Report, March 2008	Rupert Watters for Yarra
100	Submission on <i>Transport Integration Act 2010</i> and 'minimise'	Stuart Morris QC for LMA

DAY 9 Friday 14 March 2014

Document No.	Description	Tabled by
101	Submission from Australian Garden History Society (1432)	Assessment Committee Chair
102	Correspondence from Croft, 13 March 2014	Assessment Committee Chair
103	Opening submission – City of Melbourne	Ian Pitt SC for Melbourne
104	Keys PowerPoint presentation	Ian Pitt SC for Melbourne

Document No.	Description	Tabled by
105	Extract of Melways – Maps 40-44	Chris Wren SC for AC
106	Westlink News, Community Update, LMA, October 2010	Stuart Morris QC for LMA
107	Heritage Victoria, Assessment of Cultural Heritage Significance and Executive Director Recommendation to the Heritage Council, 21 February 2014	Ian Pitt SC for Melbourne
108	Correspondence from Eric Keys & Associates to Melbourne Regarding Submission on East West Link CIS	Ian Pitt SC for Melbourne
109	Higgs PowerPoint presentation	lan Pitt SC for Melbourne
110	LMA Response to the Possible Intersections at Flemington Road	Nick Tweedie SC for LMA
111	Plan from Higgs – Hand Annotated – Areas of Design Outside Project Boundary	Ian Pitt SC for Melbourne
112	Beresford PowerPoint presentation	Ian Pitt SC for Melbourne
113	Email string Regarding Beresford's instructions	Ian Pitt SC for Melbourne
114	Submission from LMA regarding Clause 52.17 Planted Vegetation Exemption	Stuart Morris QC for LMA

DAY 10 Monday 17 March 2014

Document No.	Description	Tabled by
115	Letter from Ursida, 15 March 2014 regarding: copies of documents; traffic information	Assessment Committee Chair
116	Letter from Herington, 17 March 2014 regarding consideration of economic and submissions; additional site visits	Andrew Herington
117	Letter from Ley, 17 March 2014 regarding further documentation required by the Committee	Gordon Ley
118	Bull PowerPoint presentation	Ian Pitt SC for Melbourne
119	Two A3 Plans of Summer and Winter Sports Grounds for Hire in Royal Park	Stuart Morris QC for LMA
120	Townsend PowerPoint presentation	lan Pitt SC for Melbourne
121	Lester PowerPoint presentation	Chris Lester
122	The health benefits of urban green spaces: a review of the evidence, ACK Lee, R Maheswaran (2010)	Stuart Morris QC for LMA

DAY 11 Tuesday 18 March 2014

Document No.	Description	Tabled by
123	Morbidity is related to a green living environment, Maas et al (2009)	Stuart Morris QC for LMA
124	Royal Park diagram put to Bull	Stuart Morris QC for LMA
125	Copenhagen picture put to Bull	Stuart Morris QC for LMA
126	Performance requirements summary Section 13.3, requested by Wren from Hay on Tuesday 11 March	Barnaby Chessell for LMA
127	Porteous PowerPoint presentation	Ian Pitt SC for Melbourne
128	McGauran PowerPoint presentation	Adrian Finanzio SC for Yarra
129	Letter of instruction to McGauran, 31 January 2014 from Moonee Valley CC	Adrian Finanzio SC for Yarra
130	A first look at Underpass Park in Toronto, web extract, 2012	Adrian Finanzio SC for Yarra
131	Extract of Melbourne C171 Panel Report	Stuart Morris QC for LMA
132	2two x A3 Bus Journey Diagrams, 2006, 2011	Stuart Morris QC for LMA
133	Moore PowerPoint presentation	Ian Pitt SC for Melbourne
134	Two A4 plans – Precinct 5 – Alternative Option (source unclear)	Chris Wren for AC on behalf of Kensington Residents Association
135	Clause 22.18 to the Melbourne Planning Scheme	Nick Tweedie SC for LMA

DAY 12 Wednesday 19 March 2014

Document No.	Description	Tabled by
136	Responses to Question from Assessment Committee from Fearnside, 13 March 2014	Nick Tweedie SC for LMA
137	Dyson PowerPoint presentation	Ian Pitt SC for Melbourne
138	Response by Dyson to expert evidence, 18 March 2014	Ian Pitt SC for Melbourne
139	Extracts from <i>Cultural and Historic Significance of Royal Park</i> , September 2013	Nick Tweedie SC for LMA
140	Extract from Presentation by Dyson, 8 July 2009 titled <i>Vulnerable Scenery: shifting dynamics of the natural aesthetic in Australian postwar gardens</i>	Nick Tweedie SC for LMA

Document No.	Description	Tabled by
141	Royal Park Master Plan 1998	lan Pitt SC for Melbourne
142	Extract from Essendon Baseball Club website: Ross Straw (VIC)	lan Pitt SC for Melbourne
143	Shears PowerPoint presentation	Ian Pitt SC for Melbourne
144	Two A4 plan – Change in Total Daily Traffic Volumes	Nick Tweedie SC for LMA
145	Iser PowerPoint presentation	Rose Iser
146	Biodiversity Assessment Guidelines, September 2013	Barnaby Chessell for LMA
147	Two A4 plans of additional trees suggested by City of Melbourne	Barnaby Chessell for LMA
148	East West Link Short Form Business Case Executive Summary	Stuart Morris QC for LMA
149	Correspondence to Clayton Utz from Nadebaum, 19 March 2014 in response to AC Queries	Stuart Morris QC for LMA
150	Email string and Additional Declaration from Henshall re Instructions	lan Pitt SC for Melbourne
151	Correspondence from Moonee Valley CC to Henshall, 30 January 2014 re instructions	lan Pitt SC for Melbourne
152	Henshall PowerPoint presentation	lan Pitt SC for Melbourne
153	Suggested Performance Requirements from Moonee Valley, A3 Spreadsheet	Louise Hicks for Moonee Valley
154	Melbourne Planning Scheme Proposed Expanded DDO26 Map and Schedule (Amendment C190)	Stuart Morris QC for LMA
155	Census Profile Extracts for Melbourne	Stuart Morris QC for LMA
156	Census Profile Extracts for Moonee Valley	Stuart Morris QC for LMA
157	Census Profile Extracts for Yarra	Stuart Morris QC for LMA

DAY 13 Thursday 20 March 2014

Document No.	Description	Tabled by
158	AC Request – Clarification of Forecast Traffic Volumes from LMA	Assessment Committee Chair
159	Notes from Dyson evidence given on 19 March 2014	lan Pitt SC for Melbourne

Document No.	Description	Tabled by
160	The role of mandatory provisions in planning schemes, Practice Note 59, September 2010	Stuart Morris QC for LMA
161	Submission of Ley in relation to Committee's requests for information	Gordon Ley
162	Nesbitt comments on Rosen's Recommended Amendments to the Performance Requirements, 19 March 2014	Stuart Morris QC for LMA
163	Folder of Material from Moonee Valley, including 9 tabs and various strategies/policy documents	Louise Hicks for Moonee Valley
164	Plan of land excised for construction of CityLink	Louise Hicks for Moonee Valley
165	Ormond Park Master Plan	Louise Hicks for Moonee Valley
166	Travancore Park Final Concept, 18 December 2012	Louise Hicks for Moonee Valley
167	Debneys Park Active Play and Community Spaces Brochure	Louise Hicks for Moonee Valley
168	A4 Plan of East West Link proposal impacts on Ormond Park, March 2014	Louise Hicks for Moonee Valley
169	A4 Plan of East West Link proposal impacts on Travancore Park, March 2014	Louise Hicks for Moonee Valley
170	A4 Plan of East West Link proposal impacts on Debneys Park, March 2014	Louise Hicks for Moonee Valley
171	A3 Copy of Appendix A to Moonee Valley Submission	Louise Hicks for Moonee Valley
172	Design Interventions for Moonee Ponds Creek Budget and Justification	Louise Hicks for Moonee Valley
173	Correspondence to O'Brien from Moonee Valley CC, re instructions, 31 January 2014	Louise Hicks for Moonee Valley
174	E-mail string between O'Brien and Moonee Valley CC, re instructions	Louise Hicks for Moonee Valley
175	O'Brien PowerPoint presentation	Louise Hicks for Moonee Valley
176	A4 plan – Change in Total Daily Traffic Volumes, additional to Doc 144, further north into Moonee Valley and beyond	Louise Hicks for Moonee Valley
177	Extract from Moonee Valley Racecourse Redevelopment Advisory Committee Report, 19 December 2013	Andrew O'Brien
178	Four x A4 Plans Revised Concept Alignment Option	Andrew O'Brien
179	SIDRA Model Outputs for Mt Alexander Road/Ormond Road Intersection	Andrew O'Brien
180	Map of City of Monee Valley	Nick Tweedie SC for LMA

Document No.	Description	Tabled by
181	Brown PowerPoint presentation	Louise Hicks for Moonee Valley
182	Brown response to Guide to Expert Evidence Statement, 20 March 2014 and letter to Brown from Moonee Valley CC, 31 January 2014 re instructions	Louise Hicks for Moonee Valley
183	Extract from Melbourne City Link Concession Deed – Project Scope and Technical Requirements	Louise Hicks for Moonee Valley

DAY 14 Friday 21 March 2014

Document No.	Description	Tabled by
184	Definition of 'Trees' from Shears taken from AS4373-2007	Ian Pitt SC for Melbourne
185	Correspondence from Lane to Clayton Utz, 20 March 2014 re follow up Assessment of Trees	Barnaby Chessell for LMA
186	A3 Plan of Sporting Reserve Capacity in Moonee Valley	Louise Hicks for Moonee Valley
187	Principles and guidelines for social impact assessment in the USA, September 2003	Louise Hicks for Moonee Valley
188	Environments for Health, Victorian Government, September 2001	Louise Hicks for Moonee Valley
189	Australian Early Development Index (AEDI) in Moonee Valley	Louise Hicks for Moonee Valley
190	Rosen PowerPoint presentation	Louise Hicks for Moonee Valley
191	Rosen Response to Guide to EWS	Louise Hicks for Moonee Valley
192	Correspondence to Rosen from Moonee Valley dated 29 January 2014 re instructions	Louise Hicks for Moonee Valley
193	Royal Park Master Plan 1984	Ian Pitt SC for Melbourne
194	Moonee Valley CC Submission	Louise Hicks for Moonee Valley
195	A4 Plan of Flemington Bridge Station Bike and Pedestrian Ramp	Louise Hicks for Moonee Valley

DAY 15 Monday 24 March 2014

Document No.	Description	Tabled by
196	LMA Response <i>Changes in Traffic due to East West Link</i> Bandwidth Plot	Nick Tweedie SC for LMA

Document No.	Description	Tabled by
197	Revised Travel Time Assessment, Eastern Freeway	Nick Tweedie SC for LMA
198	Extract from LMA Website regarding timelines	Stuart Morris QC for LMA
199	Two x A4 Plans of SEIFA Index 2011 from Ms Nesbitt	Stuart Morris QC for LMA
200	Revised Performance Requirements from LMA with expert and submitter input	Stuart Morris QC for LMA
201	Revised Performance Requirements from LMA – changes accepted by LMA to this point, 20 March 2014	Stuart Morris QC for LMA
202	Clause 21.09 of Melbourne Planning Scheme	Stuart Morris QC for LMA
203	Statement from LMA Reinstatement of Sporting Facilities Affected by East West Link	Stuart Morris QC for LMA
204	Memorandum of Understanding regarding Sporting Facility and Relocation Works between Melbourne CC and LMA, December 2013	Stuart Morris QC for LMA
205	Correspondence from Patrick to Clayton Utz, 21 March 2014, re suggestions for performance requirements and urban design principles	Stuart Morris QC for LMA
206	Submissions for Yarra CC	Adrian Finanzio SC for Yarra
207	Folder of documents for Yarra SC	Adrian Finanzio SC for Yarra
208	Thompson PowerPoint presentation	Adrian Finanzio SC for Yarra
209	Matter of Disagreement Following Conclave of Experts	Adrian Finanzio SC for Yarra
210	Extract from Melways	Chris Wren SC for AC
211	Correspondence from Harwood Andrews to Pitt and Sherry, 19 November 2013 re instructions	Nick Tweedie SC for LMA
212	Extract from NSW Traffic Modelling Guidelines, February 2013	Nick Tweedie SC for LMA
213	Extract from NZ Economic Evaluation Manual (Volume 1), 2010	Nick Tweedie SC for LMA
214	NISS, Convergence of Traffic Assignments: How Much is Enough?, Technical Report 155, January 2004	Nick Tweedie SC for LMA

DAY 16 Tuesday 25 March 2014

Document	Description	Tabled by
No.	Description	labled by

Document No.	Description	Tabled by
215	Correspondence from Ursida re Traffic data, 25 March 2014	Assessment Committee Chair
216	East West Link (Eastern Section) CIS, Air Quality – Near Road Emissions, 25 March 2014	Katy McGuiness for EPA
217	Zeibots PowerPoint presentation	Adrian Finanzio SC for Yarra
218	E-mail string between Yarra and Zeibots re instructions	Adrian Finanzio SC for Yarra
219	Further information on project timelines in response to the Assessment Committee request of 20 March 2014	Stuart Morris QC for LMA
220	Response to the Assessment Committee query on cut and cover in Royal Park	Stuart Morris QC for LMA
221	Extract from A Guide to the Reduction of Traffic Noise, 1986	Stuart Morris QC for LMA
222	Page 6 from EPA Vic Information Bulletin Road Traffic Noise Strategy: Background Paper, 2002	Stuart Morris QC for LMA
223	Response to Document 158 Clarification of Forecast Traffic Volumes	Nick Tweedie SC for LMA

DAY 17 Wednesday 26 March 2014

Document No.	Description	Tabled by
224	Full copy of Document 222	Adrian Finanzio SC for Yarra
225	Correspondence from Ley, 21 March 2014, re submission on Doc 149 (Nadebaum letter)	Gordon Ley
226	Clause 22.03 of Yarra Planning Scheme, Landmarks and Tall Structures	Nick Tweedie SC for LMA
227	Peter Thompson Architects v Yarra CC [2007] VCAT 812	Nick Tweedie SC for LMA
228	Clause 22.04 of Melbourne Planning Scheme, Heritage Places within the Capital City Zone	Nick Tweedie SC for LMA
229	Constitution Bridge, The Story so Far (in Italian)	Adrian Finanzio SC for Yarra
230	Assessment Committee query re maximum depth of soldier piles	Stuart Morris QC for LMA
231	Confidential Document – Appeared In Camera	Jogendra Sinha

DAY 18 Thursday 27 March 2014

Document No.	Description	Tabled by
232	Darebin PowerPoint presentation	Nathan Moresi for Darebin
233	Moreland Submission	Craig Griffiths for Moreland
234	Revised Figure 2 from Document 223 – 2031 Average Weekday Daily Traffic with the East West Link	Stuart Morris QC for LMA
235	Five x Overhead slides, Hoddle Street Intersection	Stuart Morris QC for LMA
236	Hoddle Street Alternative Option	Stuart Morris QC for LMA
237	The Tunnel Portal East of Hoddle Street	Stuart Morris QC for LMA
238	Saunders PowerPoint presentation	Andrew Saunders
239	SP Ausnet PowerPoint presentation	Michelle Quigley SC for SP Ausnet
240	SP Ausnet submission	Michelle Quigley SC for SP Ausnet
241	SP Ausnet Proposed Additional Performance Requirements, (based on Document 200 version of PRs)	Michelle Quigley SC for SP Ausnet

DAY 19 Friday 28 March 2014

Document No.	Description	Tabled by
242	Correspondence from Herington, 27 March 2014 Re provision of traffic data	Andrew Herington
243	Flemington Community Centre: Community infrastructure needs assessment, March 2014	Louise Hicks for Moonee Valley
244	Moonee Valley suggested changes to Urban Design Principles	Louise Hicks for Moonee Valley
245	Amended Performance Requirements from Moonee Valley	Louise Hicks for Moonee Valley
246	VicRoads Road Design Note, RDN 06-01	Louise Hicks for Moonee Valley
247	SEPP Air Quality Management	Stuart Morris QC for LMA
248	SEPP Ambient Air Quality	Stuart Morris QC for LMA
249	EPA Best Practice Environmental Management Guidelines for Construction Sites	Stuart Morris QC for LMA

Document No.	Description	Tabled by
250	Cook, PowerPoint presentation	Stuart Morris QC for LMA
251	EPA Submission to Senate Inquiry into impacts of health on air quality	Stuart Morris QC for LMA
252	M5 East Tunnel Filtration Trial Evaluation (NSW)	Stuart Morris QC for LMA
253	Future Air Quality in Victoria	Stuart Morris QC for LMA
254	Yarra Air Quality Trends, 2010 Data Update	Stuart Morris QC for LMA
255	Dual Gas Pty Ltd & Ors v Environment Protection Authority [2012] VCAT 308	Chris Wren SC for AC
256	EPA Introductory PowerPoint Presentation – Part 1	Katy McGuiness for EPA
257	EPA Submission Part 1 – Introduction and Regulatory Outline	Katy McGuiness for EPA
258	EPA PowerPoint Presentation Part 2 – Works Approval Application	John Marsiglio for EPA
259	EPA Submission Part 2 – Works Approval Application	John Marsiglio for EPA
260	Torre, Powerpoint Presentation	Joanne Lardner for EPA
261	Plan of Elliott Avenue Traffic Numbers	Nick Tweedie SC for LMA

DAY 20 Monday 31 March 2014

Document No.	Description	Tabled by
262	Correspondence from RATS (Hanna)	Assessment Committee Chair
263	EPA PowerPoint Presentation Part 3 – Noise	John Marsiglio for EPA
264	EPA Submission Part 3 – Noise	John Marsiglio for EPA
265	EPA PowerPoint Presentation Part 4 – Energy and Greenhouse	John Marsiglio for EPA
266	EPA Submission Part 4 – Energy and Greenhouse	John Marsiglio for EPA
267	EPA PowerPoint Presentation Part 5 – Surface Water	Leon Metzeling for EPA
268	EPA Submission Part 5 – Surface Water	Leon Metzeling for EPA

Document No.	Description	Tabled by
269	EPA PowerPoint Presentation Part 6 – Groundwater	Julia Caluzzi for EPA
270	EPA Submission Part 6 – Groundwater	Julia Caluzzi for EPA
271	EPA PowerPoint Presentation Part 7 – Contaminated Land and Waste	Laura-Lee Innes for EPA
272	EPA Submission Part 7 – Contaminated Land and Waste	Laura-Lee Innes for EPA
273	Submission for Melbourne	Ian Pitt SC for Melbourne
274	Melbourne Planning Scheme Extracts	Ian Pitt SC for Melbourne
275	Incorporated Plan IPO5 – Moonee Ponds Creek	Ian Pitt SC for Melbourne
276	Planning Scheme Map of IPO5	Ian Pitt SC for Melbourne
277	Consultation Paper by Chief Justice Preston, NSW LEC	Ian Pitt SC for Melbourne
278	Ramsdale Pty Ltd v Roads Corporation Case	Ian Pitt SC for Melbourne
279	Request for further information on traffic	Assessment Committee Chair
280	Submission	Richard Wynne MLA, Member for Richmond
281	Submission	Jennifer Kanis MLA, Member for Melbourne
282	Submission	Brian Tee MLC, Member for Eastern Metropolitan

DAY 21 Tuesday 1 April 2014

Document No.	Description	Tabled by
283	Plan showing Noise Measurements on Monash Freeway	Stuart Morris QC for LMA
284	Boroondara City Council v 1045 Burke Road Pty Ltd [2014] VSC 127	Stuart Morris QC for LMA
285	Australian Institute of Landscape Architects PowerPoint Presentation	Bruce Echberg for AILA
286	Australian Institute of Landscape Architects Submission	Bruce Echberg for AILA
287	Residents About Integrated Development @ 3051 Inc PowerPoint Presentation	Peter Hogg for RAID

Document No.	Description	Tabled by
288	Submission, Owners Corporation 18 Lennox Street, Parkville	Robert George for Owners Corporation
289	Inner Melbourne Planning Alliance PowerPoint Presentation	Darragh O'Brien for IMPA
290	Deer Park Bypass – A Case Study	Ben Hardwick for Slater and Gordon
291	Planning Institute of Australia Submissions	Liz Johnstone for PIA
292a	Schots Home Emporium Submission	Jason Sumner, Apex Town Planning for Schots
292b	Schots Home Emporium Submission Attachment	Jason Sumner, Apex Town Planning for Schots
293	Provans Timber & Hardware Submission	Tim Radisich, Associated Town Planning for Provans
294	Mercantile Cricket Association PowerPoint Presentation	Alec Kahn for MCA
295	Smith PowerPoint Presentation	Russell Smith
296	East West Link CIS Report Noise Analysis	Russell Smith
297	Virgona and O'Toole PowerPoint Presentation	Andrew Herington for Crina Virgona and Nancy O'Toole
298	National Trust Submission	Paul Roser for National Trust

DAY 22 Wednesday 2 April 2014

Document No.	Description	Tabled by
299	Response to the Assessment Committee Query on the Alexandra Parade Main Drain	Stuart Morris QC for LMA
300	Correspondence from Bunbury dated 31 March 2014	Ande Bunbury
301	Notes from Gillies and Parkville Health Precinct Child Health Professionals and Researchers	Greta Gillies
302	PIA Submission to East West Link Needs Assessment 15 July 2008	Liz Johnstone
303	The 3068 Group (Inc) PowerPoint Presentation and Notes	Chris Goodman
304	Yarra Climate Action Now Submission	Kerry Echberg
305	Plan of Bell Street Upgrade	David Moloney

Document No.	Description	Tabled by
306	RACV PowerPoint Presentation	Brian Negus for RACV and Others
307	Brunswick Zebras Football Club PowerPoint Presentation	Carlo Carli for Brunswick Zebras
308	Essendon Royals Football Club PowerPoint Presentation	Christos Stathis
309	Flemington Renewal Association Submissions three images of Flemington Housing Estate	Shadia Mohamed Aly
310	Bicycle Network Victoria Submission	Jason den Hollander
311	Carlton Residents Association Inc. Submission	lan Bird
312	Vision Australia Submission	Kevin Murfitt
313	Victorian Transport Research and Action Group PowerPoint Presentations	Mike Reece
314	Yarra Campaign for Action on Transport PowerPoint Presentation and Notes	Andrew Herington for YCAT
315	Royal Park Sport PowerPoint Presentation	Rick Boykett
316	Melbourne University Rugby Football Club PowerPoint Presentation	Rick Boykett
317	Swain PowerPoint Presentation	Alex Swain

DAY 23 Thursday 3 April 2014

Document No.	Description	Tabled by
318	Herington provision of Slide 8 and enlarged plans x two	Andrew Herington
319	University of Melbourne Baseball Club Submission	Rod McLellan
320	Flemington Association PowerPoint Presentation	Les Potts
321	Flemington Association Notes	Les Potts
322	Boroondara Bicycle Users Group PowerPoint Presentation	Peter Campbell
323	North East Bicycle Corridor Leaflet	Peter Campbell
324	Clifton Hill Primary School Presentation and Attachments	Geoff Warren

Document No.	Description	Tabled by
325	Kororoit Institute and Moonee Ponds Creek Co-ordination Committee PowerPoint Presentation	Tony Smith
326	Friends of Royal Park, Parkville PowerPoint Presentation	Kaye Oddie
327	Cut and Cover in Royal Park: The Unaddressed Impact	Kaye Oddie
328	Walter PowerPoint Presentation	Clare Walter
329	Its safe to say there's no safe level of air pollution, Paper by Associate Professor Barnett	Clare Walter
330	National Environment Protection (Ambient Air Quality) Measure	Rupert Watters leading Assoc. Prof. Irving
331	The Treatment of Air in Road Tunnels, Tunnels Study Centre, September 2010	Stuart Morris QC for LMA
332	Parkville Association PowerPoint Presentation	Robert Krelle
333	Owners of 46 Manningham Street, West Parkville, Supplementary Submission	Lucinda Peterson
334	Peyton Submission	Anthony Peyton
335	Presentation by Safety Net for Royal Park	Anthony Peyton
336	Response by SNRP on review of Brock report for LMA	Anthony Peyton
337	SLR Memorandum to Moreland City Council on M80 Traffic Noise Measurements dated 14 March 2014; and Bicycle Movements: Southbound cyclists from Brunswick	Craig Griffiths for Moreland
338	Parkville Gardens Residents Association PowerPoint Presentation	Tony Rogers
339	Presentation by Cardijn Community; costing of recent major infrastructure projects; and Bell Street Upgrade plan	David Moloney
340	Family Impact Statements Outline from Grandparents Victoria	Anne McLeish
341	Two A1 Plans for AC: Hoddle Street Alternative Interchange; Hoddle Street Interchange, Reference Project	Stuart Morris QC for LMA

DAY 24 Monday 7 April 2014

Document No.	Description	Tabled by
342	Revised Performance Requirements from EPA	Tony Robinson for EPA

Document No.	Description	Tabled by
343	EPA Response to Assessment Committee Questions	Tony Robinson for EPA
344	EPA Victoria supplementary information on air modelling 7 April 2014	Tony Robinson for EPA
345	Yarra Bicycle Users Group PowerPoint Presentation	Steven Barnett
346	Friends of Banyule Submission	Dennis O'Connell
347	Public Transport Users Association PowerPoint Presentation	Tony Morton
348	Public Transport Not Traffic PowerPoint Presentation	Cait Jones
349	Flemington Road and Curran Street North Residents PowerPoint Presentation	Michael Francis
350	Play Australia Submission	Barbara Champion
351	Youlden Parkville Cricket Club PowerPoint Presentation	Paul Sinclair
352	Galvin Submission	Gordon Ley for Pauline Galvin
353	Royal Park Reds Cricket Club Submission	Ben Zika
354	Submissions made on behalf of the LMA addressing matters raised in Doc 279	Stuart Morris QC for LMA
355	Six pages extracted from Melways 1966 - 2012	Stuart Morris QC for LMA
356	Press Release – Coalition Government takes action on Doncaster Rail Link, 3 May 2011	Adam Bandt MP, Member for Melbourne for Proforma 1 Group
357	Press Release - Eastern Freeway best route for Doncaster Rail Line, 14 March 2013	Adam Bandt MP, Member for Melbourne for Proforma 1 Group
358	Extracts of Doncaster Rail Study, Phase One Recommendations	Adam Bandt MP, Member for Melbourne for Proforma 1 Group
359	Koppel Submission	Jill Koppell for Proforma 2 Group
360	Herington PowerPoint Presentation	Andrew Herington for Proforma 2 Group
361	Naismith Photographs and Notes	Michael Naismith for Proforma 2 Group

DAY 25 Tuesday 8 April 2014

Document No.	Tabled by	
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Document No.	Description	Tabled by
362	Submission in confidence	Ross Nolan
363	Email from Peyton to Assessment Committee	Anthony Peyton
364	Addendum to SNRP Presentation – images from Atelier Red and Black	Anthony Peyton
365	Speaking notes from Smith, Kororoit Institute and Moonee Ponds Creek Coordination Committee	Tony Smith
366	Response to AC from Slater & Gordon, 4 April 2014	Ben Hardwick
367	Wahklu PowerPoint Presentation	Suresh Wakhlu
368	Loughlin submission	Graeme Loughlin
369	Mossonidis PowerPoint Presentation	Michael Mossonidis
370	Bonanno PowerPoint Presentation	Tony Bonanno
371	Saint Submission	Fiona Saint and John Michael Saint
372	PowerPoint Presentation and Notes on Case against Elliot Avenue Ramps and the Y Alternative	Andrew Herington for Fiona Saint and John Michael Saint
373	Ley Submission	Gordon Ley
374	Geary Submission	Peter Geary
375	Green Submissions and Photographs	Dennis Green
376	Cusack and Avery PowerPoint Presentation and Notes	Julia Cusack
377	Trains Not Toll Roads Rally Brochure	Pauline Galvin
378	May PowerPoint Presentation	Wayne May
379	Smith PowerPoint Presentation	Michael and Olivia Smith
380	Thomas Submission	Jan Thomas OAM
381	Noonan Submission	Gerry Noonan
382	Lamb PowerPoint Presentation	Allison Lamb

Document No.	Description	Tabled by
383	Lamb PowerPoint Presentation	Brent Lamb
384	McDougall Submission	Andrew McDougall
385	Tappe PowerPoint Presentation	Andrea Tappe
386a	Submissions – Protectors of Public Lands Victoria, Royal Park Protection Group	Tom Pikusa for PPLV and RPPG
386b	A3 Plan set - Protectors of Public Lands Victoria, Royal Park Protection Group	Tom Pikusa for PPLV and RPPG
387	Folder of material – Protectors of Public Lands Victoria, Royal Park Protection Group	Tom Pikusa for PPLV and RPPG

DAY 26 Wednesday 9 April 2014

Document No.	Description	Tabled by
388	Marshall Day Noise Report, Noone Street, Clifton Hill	Rupert Watters for Yarra
389	Revised Higgs Design	Anne Laing for Melbourne
390	Bull Opinion on Higgs Design	Anne Laing for Melbourne
391	Masters PowerPoint Presentation	Helen Masters
392	Stone PowerPoint Presentation on Transport Integration Act	John Stone
393	Somers PowerPoint Presentation	Penelope Somers
394	East Link Works Approval	Stuart Morris QC for LMA
395	Wallis PowerPoint	Ian Wallis
396	Chachs PowerPoint	David Chachs
397	Blyth Presentation	Jillian Blyth
398	Choong and Tan PowerPoint	Tina Choong
399	Isaac Submission	Anne Isaac
400	Kensington Association Submission	Mark Woodland

Document No.	Description	Tabled by
401	Kensington Association PowerPoint Presentation	Mark Woodland
402	Friends of Moonee Ponds Creek Inc	Kaye Oddie
403	Ursida PowerPoint Presentation and Notes	Carlo Ursida
404	Ingram Notes and PowerPoint Presentation	Michael Ingram
405	Di Muccio Notes and PowerPoint Presentation	Christine Di Muccio
406	Wood and Gorman Notes and PowerPoint Presentation	Renee Wood, Brent and Harley Gorman
407	Widmer Notes and PowerPoint Presentation	John Widmer
408	Hookey PowerPoint Presentation	Enid Hookey
409	Araneda PowerPoint Presentation	Maritza and Fran Araneda
410	Huth PowerPoint Presentation	Alister Huth
411	Xie Submission	Frances Xie
412	McNamara Submission	Helene McNamara
413	Three Images	Meg Colasante

DAY 27 Thursday 10 April 2014

Document No.	Description	Tabled by
414	SP Ausnet response to AC Questions, 27 March 2014	Emily Sykes
415	Lamb speaking notes	Brent Lamb
416	Lamb speaking notes	Allison Lamb
417	Stock PowerPoint Presentation	Petra Stock
418	Change.org Petition re the Zoo	Petra Stock
419	Petit Speaking Notes and Attachments	Michael Petit

Document No.	Description	Tabled by
420	Campbell Submission	Peter Campbell
421	Healey Submission	Mary Healey
422	Unkles PowerPoint Presentation	Bill Unkles
423	Pepper Submission	Susan Pepper
424	Edmonds Submission	Joseph Edmonds
425	Rice Submission	Janet Rice
426	Williams PowerPoint Presentation	Nick Williams
427	Hobson Submissions	Paul Hobson
428	Melways Extract and Photos	Stephen Alomes
429	Flinn PowerPoint Presentation and Notes	Amina and Bernard Flinn
430	Hanna PowerPoint Presentations	David Hanna
431	Residents Against the Tunnel PowerPoint Presentation	David Hanna
432	Residents Against the Tunnel Submissions	David Hanna
433	Two x A3 Photographs	David Hanna
434	Photographs and brochure	Michael Gourlay

DAY 28 Friday 11 April 2014

Document No.	Description	Tabled by
435	Book chapter on <i>Ecological impacts of road noise and options for mitigation</i> provided by Stock	Petra Stock
436	Stock Speaking Notes	Petra Stock
437	Correspondence from Champion dated 10 April 2014; TTM Report Attached	Barbara Champion
438	Access to properties at the corner of Alexandra Parade and Hoddle Street document from LMA	Stuart Morris QC for LMA

Document No.	Description	Tabled by
439	LMA Response to DDO Query – Flagstaff Consulting Report document from LMA	Stuart Morris QC for LMA
440	Beuchat Speaking Notes	Daniel Beuchat
441	Kelly Speaking Notes	Andrew Kelly
442	Burrows Speaking Notes	Roy Burrows
443	Melbourne revised Performance Requirements	Anne Laing for Melbourne
444	Melbourne revised Urban Design Principles	Anne Laing for Melbourne
445	Submission from Smith on Rail Transport of Spoil	Andrew Herington for Russell Smith
446	Fitzgerald Submission	Keith Fitzgerald
447	Benson PowerPoint Presentation	Tony Benson
448	Bunbury PowerPoint Presentation	Ande Bunbury
449	Bunbury Recommendations for AC	Ande Bunbury
450	Moodie PowerPoint Presentation	Simon Moodie
451	Silvestro Submission	Mara Silvestro
452	Steinfort Family PowerPoint Presentation	Paul Steinfort
453	Collingwood Historical Society PowerPoint Presentation	Anne Holmes and Janet Taylor
454	Marjoram PowerPoint Presentation	Tony Marjoram
455	O'Connor PowerPoint Presentation	Bernadette O'Connor
456	Oppenheim PowerPoint Presentation	Richard and Annette Oppenheim
457	Nataprawira PowerPoint Presentation and notes	Roslyn Nataprawira
458	Krivanek Submission	Rosamund Krivanek
459	Denmead PowerPoint Submissions	Stewart and Claire Denmead

Document No.	Description	Tabled by
460	Gherardin PowerPoint Presentation	Elizabeth Frances Gherardin
461	Rizio PowerPoint Presentation	Dario and Chris Rizio
462	Lewis PowerPoint Presentation and Notes	Nigel Lewis
463	Turnbull Submission	Jenelle Cramer from Gadens for James Turnbull
464	Vowels Submission and Attachments	Robin Vowels
465	Table from CIS with highlighted 8 Storey comment from Barclay	Zoe and Benjamin Barclay
466	Ingram PowerPoint Presentation	Michael Ingram
467	E-mail and Urban Circus images from Ingram	Michael Ingram
468	Provis PowerPoint Presentation	Beatka Provis
469	Hobson Appendix on Open Space Benefit research	Paul Hobson
470	Rickards Tabled Speaking Notes	Anne Rickards
471	McNamara Speaking Notes	Helene McNamara
472	Merkel Speaking Notes	Bianca Merkel
473	Response to the Assessment Committee on the Alignment of Part B to the East of CityLink	Stuart Morris QC for LMA

DAY 29 Monday 14 April 2014

Document No.	Description	Tabled by
474	Ursida Amended Performance Requirements	Carlo Ursida
475	Correspondence from Bunbury	Ande Bunbury
476	Yarra Amended Performance Requirements	Rupert Watters for Yarra
477	Yarra Amended Urban Design Principles	Rupert Watters for Yarra
478	Alexandra Parade Traffic Volumes	Stuart Morris QC for LMA

Document No.	Description	Tabled by
479	Response to the Assessment Committee on Land Acquisition Matters	Stuart Morris QC for LMA
480	Correspondence from Herington, 14 April 2014 re DTPLI Briefing on CIS	Andrew Herington
481	Qalinle Submission	Abdikashur Qalinle
482	Map provided by Sharp	Heather Reva Sharp
483	A3 Handouts from Duxbury	Kenneth Duxbury
484	Croft The Accuracy of VLC's Zenith Model	Terry Croft
485	Croft Flawed EWL Traffic Projections	Terry Croft
486	Croft Crofts Alternative Design to EWL	Terry Croft
487	Brown PowerPoint Presentation	Malcolm Brown
488	Herington Submission	Andrew Herington
489	Herington Closing submission, Community analysis and Recommendations Committee should make	Andrew Herington
490	Yarra Amended Incorporated Document	Rupert Watters for Yarra
491	Response to query from Mr Grogan of AC from Victorian Transport Action Group	Mike Reece
492	Aerial Photo of Flemington Community Garden showing project boundary	Stuart Morris QC for LMA
493	Doncaster Rail document	Stuart Morris QC for LMA
494	SMART Criteria Response	Stuart Morris QC for LMA
495	Air Quality in and Around Traffic Tunnels	Stuart Morris QC for LMA
496	Urban Camp PowerPoint Presentation	Patrick O'Sullivan, Jacqueline Whitby
497	Dwyer Submission	Rohan Dwyer
498	Traffic Volumes at Hoddle Street	Nick Tweedie SC for LMA
499	Comparison tables of traffic at Hoddle Street	Nick Tweedie SC for LMA

Document No.	Description	Tabled by
500	Hoddle Street Interchange Ramps Daily Traffic Volumes	Nick Tweedie SC for LMA
501	Phelan Submission	Justine Phelan
502	Ioannou Submission	Omni Ioannou
503	England and LeGallez PowerPoint Presentation	Thomas England
504	Australian Garden History Society Submission	John Dwyer
505	Clarke Presentation and Speaking Notes	Alison Clarke
506	McLelland Submission	Darren McLelland
507	Response to the Assessment Committee Regarding the Land Requirements at Ross Straw Field	Stuart Morris QC for LMA

DAY 30 Tuesday 15 April 2014

Document No.	Description	Tabled by
508	Photographs from Alomes	Stephen Alomes
509	E-mail regarding Spadina Highway from Rudner	Julie Rudner
510	Noise Complaints M80 Ring Road (<u>To be provided in electronic form only</u>)	Craig Griffiths for Moreland
511	Article from The Age on Airport Rail dated 15 April 2014	Andrew Herington
512	Closing Submission from the Minister for Planning	Chris Townshend SC for Minister for Planning
513	Closing Submission from Melbourne City Council	Ian Pitt SC for Melbourne
514	Closing Submission from Yarra City Council	Adrian Finanzio SC for Yarra
515	Appendix B LMA Response to Moonee Valley City Council's Open Space Design Interventions and Mitigation Requirements – MVCC Response	Louise Hicks for Moonee Valley
516	Flemington and Travancore Land Ownership Plan	Louise Hicks for Moonee Valley
517	Flemington and Travancore Opportunities Plan	Louise Hicks for Moonee Valley

Document No.	Description	Tabled by
518	Revisioning Flemington and Travancore – Post East West Link Plan	Louise Hicks for Moonee Valley
519	Table: Indicative Strategy – Impact, displacement and relocation of sporting users	Louise Hicks for Moonee Valley
520	Closing Submission for Moreland City Council	Craig Griffiths for Moreland
521	Closing Submission for EPA	Tony Robinson and Katy McGuiness for EPA
522	EPA Closing PowerPoint Presentation	Tony Robinson and Katy McGuiness for EPA
523	Closing Submission for Community Groups	Tom Pikusa for PPLV, RPPG and Community Groups
524	SNRP Response to LMA Document 473	Anthony Peyton for SNRP
525	Closing Submission for LMA; Folder containing Submission, Performance Requirements, Urban Design Principles, Response to Submissions, Incorporated Document	Stuart Morris QC for LMA
526	PowerPoint Presentations to illustrate Closing Submission	Stuart Morris QC for LMA
527	Speaking Notes	Cr James Cusack
528	McNamara: Flemington and Kensington Conservation Study 1985, City of Melbourne	Helene McNamara
529	Flemington Community Gardens – site plan	Michael Gourlay

Appendix D: Revised Incorporated Document



East West Link Project Incorporated Document

[Amend to insert applicable approval date]

Incorporated document pursuant to section 6(2)(j) of the *Planning and Environment Act* 1987

[NOTE: This document has been drafted to reflect the Assessment Committee's Primary Recommendation which among other things sets aside Part B of the Project. If the Committee's Primary Recommendations are not accepted, further modifications will be required to reintroduce references to Part B of the Project in Section 2.0 Purpose, Part 4.0 Control, Part 5 Conditions, and the Plans contained in Sheets 1 – 5 in Figure 1.]

1.0 INTRODUCTION

This document is an incorporated document in the Melbourne, Moonee Valley, Moreland and Yarra Planning Schemes pursuant to section 6(2)(j) of the *Planning and Environment Act* 1987.

The East West Link Project (the Project), is a new road connection between the Eastern Freeway and the Port of Melbourne. It comprises two parts. Part A is a connection between the Eastern Freeway and CityLink. Part B is a connection from CityLink to the Port of Melbourne.

The land identified in this document may be used and developed in accordance with the provisions of this document.

The controls in this document prevail over any contrary or inconsistent provision in the Melbourne, Moonee Valley, Moreland or Yarra Planning Schemes.

2.0 PURPOSE

The purpose of this document is to allow the use and development of land for the purposes of Part A of the Project which is a new road connection from the Eastern Freeway to CityLink, including a new tunnel.

3.0 LAND

The control in this document applies to the land in the Cities of Melbourne, Moonee Valley, Moreland and Yarra shown as "Project Area" in Figure 1 of this document.

4.0 CONTROL

Despite any provision to the contrary or any inconsistent provision in the Melbourne, Moonee Valley, Moreland or Yarra Planning Scheme, no planning permit is required for, and nothing in the Planning Schemes operate to prohibit or restrict the use or development of

land in the Project Area for the construction and operation of Part A of the Project, which includes, but is not limited to:

- A freeway standard road connecting the Eastern Freeway to CityLink and improvements to CityLink.
- Interchanges and grade separations associated with road connections.
- A new road tunnel and associated infrastructure.
- Earthworks and structures, kerbs, channels, cuttings, batters and fill associated with the Project.
- Ancillary activities including, but not limited to:
 - Establishing and using lay down areas for construction purposes.
 - Constructing and using temporary site workshops and storage, administration and amenities buildings.
 - Displaying direction, construction and business identification signs.
 - Removing, destroying and lopping trees and removing vegetation, including native vegetation.
 - Demolishing and removing buildings, structures and works.
 - Constructing fences.
 - Constructing or carrying out works to create bunds, mounds, landscaping, shared use paths and wetlands, excavate land and salvage artefacts.
 - Constructing and using temporary access roads, diversion roads and vehicle parking areas.
 - Constructing or carrying out works to alter or relocate drainage, utilities and services.
 - Creating or altering access to a road in a Road Zone, Category 1.
 - Subdividing and consolidating land.

This control is subject to the conditions in clause 5.0 of this document.

5.0 CONDITIONS

5.1 The use and development and the ancillary activities specified in clause 4.0 of this document must be:

- a. For Part A of the East West Link Project as authorised by the State Government of Victoria under an agreement between the State and the entity appointed to undertake Part A of the East West Link Project.
- b. In accordance with the Urban Design Principles in Table 1 of this document.
- c. In accordance with the Performance Requirements in Table 2 of this document.
- d. In accordance with the Environmental Management Framework presented in the Comprehensive Impact Statement and which in addition should include provision for:
 - i) a mechanism for public reporting of compliance against the EMF and EMPs
 including the reports of the Independent Auditor;
 - a complaints management process that is accessible to the general community; and
 - iii) the establishment and administration of a Community Liaison Committee for the duration of the construction period for the Project. The Project Community_Liaison Committee is to have an independent Chair and include representatives from the LMA, contractor, Councils, relevant statutory authorities and the community.
- e. Undertaken generally in accordance with a construction environmental management plan (Construction Environmental Management Plan) prepared to the satisfaction of the Minister for Planning, after consultation with Linking Melbourne Authority, the Environment Protection Authority and the relevant municipal council(s).
 - i) The Construction Environmental Management Plan must be prepared in accordance with the Environmental Management Framework in the Comprehensive Impact Statement for the Project.
 - ii) The Construction Environmental Management Plan must include the following:
 - a) A dust management plan;
 - b) A noise management plan;
 - c) A surface water management plan; and

- d) A groundwater management plan to manage potential groundwater impacts, including the risk of "mobilisation" and/or "migration" of contaminated groundwater.
- iii) Any Performance Requirements in the Environmental Management Plan must be consistent with the Performance Requirements in Table 2 of this Incorporated Document.
- iv) The Construction Environmental Management Plan may be prepared and approved for stages of the Project and separate plans may be prepared for each stage for construction and operation.
- v) With the approval of the Independent Auditor, the Environmental Management Plan may be amended from time to time to clarify or improve environmental management practices or procedures or add new obligations and associated controls, without increasing or introducing new environmental risks or impacts, must be prepared to the satisfaction of Linking Melbourne Authority after consultation with the relevant municipal council(s).
- vi) After endorsement from the Independent Auditor, amendments to the Environmental Management Plan which provide for a change to work methods or scope that results in increased or new environmental risks or impacts, must be prepared to the satisfaction of the Minister for Planning after consultation with Linking Melbourne Authority and the relevant municipal council.

6.0 EXPIRY

The control in this document expires if any of the following circumstances applies:

- The development allowed by the control is not started by 31 December 2020.
- The development allowed by the control is not completed by 31 December 2030.
- The use allowed by the control is not started by 31 December 2030.

The responsible authority may extend these periods if a request is made in writing before the expiry date or within three months afterwards.

Figure 1 (Sheets 1-5)

[Insert amended Sheets 1-5 of Figure 1 to the CIS that exclude Part B and have been further modified to reflect the Assessment Committee's Primary and Project Specific Recommendations contained in the *Executive Summary and Consolidated List of Recommendations*].

Table 1: Urban Design Principles

[Insert the Assessment Committee's recommended version of the Urban Design Principles which are contained in Appendix F of this Report].

Insert Table 2: Performance Requirements

[Insert the Assessment Committee's recommended version of the Performance Requirements which are contained in Appendix E of this Report].

Appendix E: Revised Performance Requirements



East West Link (Eastern Section) Performance Requirements Assessment Committee Recommended Version

NOTE: Text highlighted in yellow is to apply if the Assessment Committee's Primary Recommendations in relation to setting aside Part B are <u>not</u> accepted.

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
Traffic				
Transport connectivity – to improve road-based transport connectivity between the east of Melbourne and the Port of Melbourne and the wider metropolitan region and the State, while maintaining the connectivity of existing local transport routes.	Consent under clause 1 of Schedule 2 of the Road Management Act 2004 allowing connection to a freeway Planning scheme amendment under sections 8, 29 and 35 of the Planning and Environment Act 1987	To improve road-based transport connectivity between the east of Melbourne and the Port of Melbourne and the wider metropolitan region and the State, while maintaining the connectivity of the existing local transport routes	T1	 Optimise the design of East West Link – Eastern Section in consultation with appropriate road management authorities as part of the detailed design process to: Minimise adverse impact on travel times for all transport modes, including walking and cycling; Maintain, and where feasible, enhance the existing traffic movements at interchanges; Enhance north-south traffic movements across Alexandra Parade, including north-south public transport (particularly tram priority), pedestrian and cycling movements by signals management and post construction measures that reduce the capacity of Alexandra Parade; Design interchanges and intersections to meet relevant road and transport authority requirements; Maintain, and where feasible, enhance pedestrian movements and bicycle connectivity; Develop a strategy with Public Transport Victoria to minimise impacts on buses, trams and rail and, where feasible, enhance public transport facilities and services that cross or run parallel to the alignment of the East West Link – Eastern Section; Ensure that any design does not prevent the opportunity for a light or heavy rail connection to Doncaster to the satisfaction of Public Transport Victoria; and Minimise loss of car parking in consultation with relevant local councils. Undertake traffic monitoring in selected streets identified in consultation with the relevant local council pre-construction, at two yearly intervals during construction (up to two years after construction is complete), and implement local area traffic management works in consultation with the local relevant councils.

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
			Т3	In Precinct 1 and 2 design the Project to:
				Ensure no road construction is undertaken at-grade beyond the northern road reservation boundary on Alexandra Parade between Smith Street and Gold Street;
				 Cover, whether by roofing or tunnel, to approximately 400m east of Hoddle Street, the through carriageways of the Eastern Freeway extension into the Project. Opportunities for alternative uses of the covered area, including open space, should be explored;
				Ensure the ramp serving the northbound Hoddle Street movement east on to the Eastern Freeway be constructed at a reduced level no higher than the existing pavement level of Hoddle Street; and
				 Ensure the cross section of Alexandra Parade and Princes Street post construction is reduced to constrain east - west traffic movement, facilitate additional north - south traffic signal green time and achieve amenity and urban renewal objectives.
				In Precinct 3 design the Project to:
				Ensure the Project design does not include ingress and egress to Elliott Avenue;
				Accommodate only a northerly connection to and from CityLink;
				Ensure tunnel portals are located proximate to Oak Street and bored or covered across the Manningham Parklands (Royal Park west of the Upfield Railway Line) to avoid elevated structures and any residential property acquisition;
				Reduce the impact on the Essendon Community Garden and the Moonee Ponds Creek by moving the intersection of Ormond Road and the northbound Ormond Road off-ramp east closer to CityLink and minimising the separation distance between the off-ramp and CityLink; and
				 Avoid significant impacts on the Flemington Housing Estate.
				In Precincts 5 and 6 design the project to:
				 Avoid a connection to Arden Street;
				 Avoid significant impacts on:
				- The Moonee Ponds Creek;
				- The Arden-Macaulay redevelopment area; and
				- The West Melbourne Terminal Station.
				 Achieve an alternative to the Reference Project's viaduct along Part B alignment and connections from and to CityLink south to the Western Portal of Part A, with the redesign including consideration of the alternatives of a road in-tunnel or an elevated road on the east side of CityLink.

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
				Performance requirements Develop and implement traffic management measures to minimise disruption to motor vehicle traffic, parking, bicycle and pedestrian movements during construction in consultation with relevant road management authorities, including: • Management of any temporary or partial closure of traffic lanes, including along: • Local roads, including provision for suitable routes for vehicles, cyclists and pedestrians to maintain connectivity for road and shared path users; • Eastern Freeway, Hoddle Street and Alexandra Parade; • Flemington Road and Elliott Avenue; • CityLink traffic lanes and ramps; • Macaulay Street, Arden Street and Dynon Road; and • Footscray Road and Appleton Dock Road. • Maintain access to the Melbourne Zoo and State Netball and Hockey Centre, Urban Camp and Royal Park recreational facilities; • Only use Haulage Route 3 for the transport of spoil produced from tunnelling activities in consultation with the relevant authorities; • Restrict the number of local roads to be used for construction-related transportation to minimise impacts on amenity, in consultation with the relevant road authorities; • Reinstate access to open space, community facilities, commercial premises and dwellings if disrupted, as soon as practicable;
				 Provide on-site parking to accommodate the construction workforce whilst minimising traffic impacts on local roads;
				Prevent parking on local roads or use of public car parks including those at the Melbourne Zoo and
				State Netball and Hockey Centre;
				Provide safe access points to laydown areas and site compounds; Implement a communications strategy to advise affected users retentially affected users relevant.
				 Implement a communications strategy to advise affected users, potentially affected users, relevant stakeholders and the relevant road authorities of any changes to transport conditions; and
				Maintain, where feasible, current local area traffic management measures during construction or reinstate upon completion in consultation with the relevant local councils.

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
		To minimise disruption to public transport and rail	Т5	Develop and implement measures to minimise disruption during construction to the South Morang/Hurstbridge and Upfield railway lines and all impacted tram and bus routes in consultation with VicTrack, Yarra Trams and MTM and to the satisfaction of Public Transport Victoria.
		freight during construction	Т6	Minimise disruption to the rail infrastructure south of Arden Street to the satisfaction of the operators.
		To minimise potential for accidents by managing road safety for all new road linkages	Т7	Design new works in accordance with applicable road design standards and undertake independent road safety audits after each stage of detailed design and after construction.
Land use and utility as	ssets			
Land use, dwellings and infrastructure – to minimise adverse impacts and achieve appropriate integration with adjoining land uses, including minimal displacement of existing land use activities, dwellings and infrastructure.	Planning scheme amendment under sections 8, 29 and sove 35 of the Planning and Environment Act 1987 Licence under section 67 of the Water Act 1989 required to construct, alter,		LU1	 Design to minimise permanent footprint to reduce adverse impacts on potentially affected land uses, particularly: Royal Park; Debney's Park (Flemington Community Centre, Playspace and Community Gardens); Brisbane Reserve/Essendon Community Gardens and Ormond Park (areas permanently impacted by ramps/viaducts); Fenton Reserve and Delhi Reserve; and Residential properties in proximity to the project area including but not limited to Bent Street Kensington, Manningham and Oak Streets West Parkville, Bendigo and Hotham Streets in Collingwood, and in the area of the proposed sidetrack north of Alexandra Parade. Locate the Elliott Avenue Portal at, or outside, the park edge. Ensure there is no cut and cover east of Elliott Avenue. Ensure that there is no net loss of Royal Park parkland and no net loss of public open space. Provide new areas of open space proximate to Part B which are functional and accessible in the immediate precinct. Protect the Moonee Ponds Creek as a multifunctional urban parkway and landscape corridor. Where overshadowing of the Moonee Ponds Creek must occur, create solutions to achieve a level of urban quality of amenity which will encourage use and provide a level of public safety.

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
			LU2	Design to protect and, where practicable, improve access to and amenity for potentially affected residents, open space, social and community infrastructure and commercial facilities by responding to the Urban Design Framework including the urban design principles and implementing the principles of Crime Prevention Through Environmental Design.
			LU3	Design with regard to the Arden - Macaulay Structure Plan and Moonee Ponds Structure Plan, particularly in relation to providing for recreation, open space and connectivity opportunities along Moonee Ponds Creek, and access to social and community infrastructure.
				Prepare, fund and implement the proposed mitigation requirements, design interventions, and associated works for Moonee Ponds Creek Linear Park (within Precincts 3 and 4), and the mitigation requirements for Debney's Sports Precinct, Delhi Reserve, Travancore Park, Fenton Street Reserve, Brisbane Reserve and Ormond Park as specified in Moonee Valley City Council's submission (Document 515), in consultation with Melbourne Water, the City of Melbourne and the City of Moonee Valley, including consideration of specific design interventions for shared path networks and water sensitive urban design opportunities.
			LU4	Protect, and/or modify utility and public assets to the standard requirements and satisfaction of asset owners.
				Prior to the commencement of major construction works in the area, prepare and implement a master plan for Debney's Park developed in consultation with relevant stakeholders including the Office of Housing, Moonee Valley City Council and Flemington Neighbourhood Renewal Board or other representative of the estate tenants.
				The Masterplan must include:
				 Replacement of the Debney's Park playground with a new facility of equal or higher standard to the existing playground away from the project area;
				 Replacement of the Flemington Community Centre with a new facility of equal or higher standard to the existing centre away from the project area; and
				 Replacement of the Flemington Community Garden with a new area of equal or higher utility to the existing garden away from the project area.
				Relocate the Manningham Street playground within walking distance for local residents at the start of the project in consultation with the City of Melbourne.
				If the Essendon Community Gardens are impacted by the Project, provide mitigation works requested by the Gardens.
			LU5	Undertake dilapidation surveys within 50m of any project works or the Project Boundary, whichever is the greater, and any other significant assets that may be affected prior to commencement of construction,

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
				during construction as requested, and post construction. The surveys must include photographic and video recording with appropriate identification and marking of existing damage, and must be undertaken by independent qualified assessors of existing infrastructure, buildings and structures. For underground works, the 50m is to be measured horizontally outwards from a vertical line at the edge of works intersecting the ground surface.
				Establish an independent mediation process for the assessment of claims to operate up to five years post commencement of full Project operation. All damage to property due to the Project must be 'made good' at the contractor's expense.
			LU6	Minimise the impacts on SP AusNet's West Melbourne Terminal Station and facilitate its redevelopment / upgrade in a timely manner by ensuring that:
				 the reference project boundary in the CIS does not encroach into the West Melbourne Terminal Station;
				 the Fisherman's Bend Tower adjacent to the West Melbourne Terminal Station is relocated to the satisfaction of SP AusNet and to a timetable to be agreed by SP AusNet;
				 No works are undertaken within 5.0 metres of SP AusNet's underground 220kV electricity assets, unless special requirements for an alternative distance have been fulfilled in accordance with the requirements of SP AusNet's Transmission Field Work Procedures document FWP 05-05, as amended or replaced from time to time. To ensure that this minimum distance is adhered to, before any works are undertaken, accurate location of the underground cable asset by the LMA must be determined. This location shall be in addition to as-built drawings and may include cable location or ground penetrating radar techniques;
				 Subject to the requirement below, all works are undertaken in accordance with the SP AusNet Design Guidelines for alterations to the 220 kV cable that runs between Richmond Terminal Station and Brunswick Terminal Station, as amended or replaced from time to time;
				 Risk assessments and safety studies detailing the impact on electricity network infrastructure are completed in accordance with IEC 62067, which is the International Standard for the design, construction and testing of power cables with rated voltages up to 500kV, as amended or replaced from time to time; and
				 Design and construction of the proposed freeway does not interrupt or in any way interfere with the supply of electricity or gas by SP AusNet.
			LU7	Ensure that:
				No works are undertaken within 3.0 metres of licensed transmission gas pipeline or underground

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
				regulating station;
				 Subject to the requirement below, clearances to all gas assets are as per the Conditions of Works as detailed in Technical Standards TS2607.1, TS2607.2 and TS 2607.3, as amended or replaced from time to time;
				Risk assessments and safety studies detailing the impact on gas network infrastructure are completed in accordance with AS 2885, which is the Standards Australia standard for the design, construction, testing, operations and maintenance of gas and petroleum pipelines that operate at pressure in excess of 1050 kPa, as amended or replaced from time to time.
		To ensure that the development of land above the tunnel is not adversely affected by construction or operation of the tunnel, and that development of land above the tunnel does not adversely affect the construction or operation of the tunnel.	LU8	On finalisation of the detailed project alignment, extent of tunnel and its vertical alignment, prepare and introduce into the City of Melbourne and City of Yarra Planning Schemes an appropriate Design and Development Overlay control to achieve the Performance Objective, consistent with the scope agreed between the LMA and the Assessment Committee's technical advisor.
Community and busin	ess impact			
Land use, dwellings and infrastructure – to minimise adverse impacts and achieve appropriate integration with adjoining land uses, including minimal displacement of	Planning scheme amendment under sections 8, 29 and 35 of the Planning and Environment Act 1987	To minimise impacts on the community and business through engagement during construction and operation	C1	Develop and implement a community and business involvement plan in consultation with affected local Councils to engage and consult potentially affected stakeholders and discuss progress of construction activities and operation, including significant milestones, potential impacts, mitigation measures, changed traffic conditions and other matters which are of interest or concern to them, including: • Municipalities; • Melbourne Zoo; • State Netball and Hockey Centre; • Urban Camp Melbourne;

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
existing land use				Recreation, sporting and community groups;
activities and dwellings.				Office of Housing;
				 Flemington Estate tenants and the Flemington Neighbourhood Renewal Board;
				Potentially affected residents and property owners;
				Potentially affected businesses; and
				Other public facilities in proximity.
				Facilitate the formation of a Community Liaison Group for the Manningham Street/West Parkville residents and property owners.
				Establish a community grant program to operate during construction of the Project to fund community support activities and small capital works targeting community, sporting and recreation facilities in the local region as defined in the social impact assessment.
			C2	Participate in the Community Advisory Group (CAG) that is to be established by the State to facilitate community and stakeholder involvement in the development and delivery of the project in an advisory capacity. Participation shall include:
				Regular attendance at all meetings;
				Regular reporting of design and construction activities;
				Timely provision of relevant information, including response to issues raised by the group;
				 Regular reporting and monitoring of impacts and discussion of mitigation measures and their effectiveness;
				Appointment of an independent Chair; and
				Participation in other CAG stakeholder groups as required by the State.
Visual and landscape				
Visual amenity – to minimise adverse impacts on the quality of the existing built	Planning scheme amendment under sections 8, 29 and 35 of the <i>Planning</i> and <i>Environment</i>	To minimise impacts on the built environment and landscape, including public open space,	LV1	Design in consultation with relevant local Council to demonstrate how the Urban Design Framework, including the urban design principles, has been met. Minimise impacts on the built environment and landscape, including public open space, and maximise opportunities for enhancement of public amenity resulting from the project, in consultation with relevant stakeholders, particularly in relation to: Road linkages between Hoddle Street and the Eastern Freeway;
environment and landscape, including	Act 1987	and to maximise opportunities for		The Shot Tower in Alexandra Parade;

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requi	rements			
public open space,		enhancement of		Any bridges, eleva-	ed and below ground road struc	tures;		
and to maximise the enhancement of	Licence under	public amenity and safety		Existing landmark	urban elements across the projec	ct, including CityLink;		
public amenity	section 67 of the Water Act 1989			Open space includ	ng Royal Park, <mark>Debney's Park</mark> , Tr	avancore Park, Ormond Park and H	Iolbrook Reserve;	
where opportunities exist.	required to			Melbourne Zoo, t	he State Netball and Hockey Cen	tre and Urban Camp;		
CAISC	construct, alter, operate or			Moonee Ponds C	reek and Merri Creek; and			
	decommission works on a			 Delhi Reserve, Bri Flemington Comr 		endon <mark>and Flemington</mark> Community	Gardens <mark>and</mark>	
	waterway, including works to deviate a			Residential interf	aces – relocation or reinstateme	nt of potentially affected communi	ty facilities;	
	waterway.			Business interface	es; and			
					I party' signage must be prohibit frastructure associated with the	ed. This includes any 'billboard' sig Project.	gnage on or	
			LV2	local Council to minim connectivity to public	ise any adverse visual impact, the	n with relevant stakeholders include e footprint and disturbance, and to Park and along Moonee Ponds and	maximise	
			LV3	Reinstate public open spaces, vegetation cover and facilities disturbed by temporary works to the satisfaction of the land manager.				
				user paths and achieve		d facilities, improve pedestrian acc Royal Park and other affected area design principles.		
Noise, vibration and	light							
Noise, vibration, air		To minimise traffic	NV1	Comply with the follow	ving limits on noise levels for the	duration of the concession period	:	
emissions and light spill – to minimise		noise impacts of East West Link – Eastern		Aspect	West end	East end		
adverse impacts from noise, vibration, air		Section and local roads		Applies to the following roads within the Limit	East West Link – Eastern Section carriageways connecting the western	Hoddle Street in particular Bendigo Street		
emissions and light spill.				of Works:	portal to CityLink, and associated ramps	 north side of Alexandra Parade between Gold and Smith streets 		
<u> </u>					 East West Link – Eastern 			

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requir	ements	
					Section carriageways connecting the western portal to the Port connection The Port connection and associated ramps. Where CityLink adjoins the Project, the noise limit applies to the total noise generated. In the case of Category A or B buildings as defined in the VicRoads Traffic Noise Reduction Policy affected by relocation of a noise barrier or by demolition of a structure exposing dwellings to higher traffic noise levels; the noise limit applies to the above roads, plus CityLink.	- Eastern Freeway - East West Link - Eastern Section - Ramps or other roads connecting Hoddle Street, Eastern Freeway or East West Link - Eastern Section - Ramps and carriageways connecting Elliott Avenue and East West Link - Eastern Section. In the case of Category A or B buildings as defined in the VicRoads Traffic Noise Reduction Policy affected by relocation of a noise barrier or by demolition of a structure exposing dwellings to higher traffic noise levels; the noise limit applies to the above roads.
				External criteria (7am to 10pm)	63dB L _{A10(15h)}	63dB L _{A10(15h)}
				Applies at	Category A or B buildings	Category A or B buildings
					All levels	All levels
				External criteria (10pm to 7am)	58dB L _{A10(9h)}	58dB L _{A10(9h)}
				Applies at	Category A or B buildings	Category A or B buildings
					All levels	All levels
				Internal criteria	AS2107	AS2107
				Implemented when	External criteria cannot be complied with by practicable	External criteria cannot be complied with by practicable

CIS evaluation objective	Applicable approval	Performance objective	PR code	Pe	erformance require	ements			
						means (practicability as defined in the VicRoads Design Note 6-1) and noise from the project is predicted to cause the external L _{A10(15h)} (day) or L _{A10(9h)} (night) (including all road traffic noise) to increase by 2dB or more.	means (practicability as defined in the VicRoads Design Note 6-1) and noise from the project is predicted to cause the external L _{A10(15h)} (day) or L _{A10(9h)} (night) (including all road traffic noise) to increase by 2dB or more.		
					Applies at	All levels	All levels		
					63dB L _{A10(15h)}	63dB L _{A10(15h)}			
					criteria (passive)	Subject to practicability as defined in the VicRoads Design Note 6-1.	Subject to practicability as defined in the VicRoads Design Note 6-1.		
					Open space	68dB L _{A10(15h)}	68dB L _{A10(15h)}		
					criteria (active)	Subject to practicability as defined in the VicRoads Design Note 6-1.	Subject to practicability as defined in the VicRoads Design Note 6-1.		
				•	Ensure that when a period relevant to	· ·	07, noise shall be measured during irement duration shall be 10-60 m		
		To minimise noise impacts of the tunnel ventilation system	NV2	Design and implement the tunnel ventilation system to achieve compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1). Provide detailed design to the satisfaction of EPA Victoria prior to works commencing.					
		To minimise traffic noise impacts of East West Link – Eastern	NV3	an	nelioration treatment		nine and implement appropriate n Requirement NV1 and meet the U sultation with local Councils.		
		Section and Local Roads	NV4	ac no	cordance with VicRoa sise reduction policy 2	nds Road Design Note RDN 6-1 In 2005 to verify conformance with	operation and monitor traffic nois terpretation and application of Vio Performance Requirement NV1 ar edial action as soon as practicable	cRoads traffic nd publish	

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements				
				targets are not met.				
				Measurement locations are to be determined to the satisfaction of EPA Victoria in consultation with loca Councils.				
			NV5	Measure noise from the tunnel ventilation system on commencing road operation and monitor noise from the tunnel ventilation system to verify compliance with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1). Publish reports confirming compliance testing results and take remedial action as soon as practicable if noise level targets are not met.				
		Manage surface construction noise to protect amenity	NV6	Prepare and implement a Construction Noise Management Plan (CNMP) to the satisfaction of EPA Victori in consultation with affected local Councils. The CNMP must meet the surface construction noise criteria set out in EPA Victoria publication 480 Guidelines for Major Construction Sites, EPA Victoria Publication 1254 Noise Control Guidelines and Australian Standard 2436 2010 Guide to Noise Control on Construction Maintenance and Demolition Sites including:				
				working hours;				
				night time (if required) and day time construction noise limits;				
				a noise communications plan for advising and informing the community of work scheduling and working hours; and				
				monitoring and response protocols for man	naging noise complaints and	remedial action.		
		Manage construction vibration and regenerated noise	NV7	Achieve target levels for continuous vibration fr occupied buildings (including heritage buildings Standard 2187.2).				
		impacts to protect amenity		Type of space occupancy	Vibration ve	elocities (mm/s)		
					Day (16-hour day)	Night (8-hour night)		
				Critical working areas (e.g. hospital operating theatres, some precision laboratories)	0.5 mm/s	0.5 mm/s		
				Residential	2 mm/s	0.7 mm/s		
				Offices	2 mm/s	2 mm/s		
				Workshops	4 mm/s	4 mm/s		
				Implement remedial action as soon as possible in	f these target levels are exce	eeded.		

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance	requirements		
			NV8	Target levels to be achieved at properties for impulse vibration from construction activity to protect human comfort of occupied buildings are as follows (levels are calculated for the Australian Standard 2187.2 and the DIN 4150.2).			
				Category	Peak component particle velocity (mm/s)	Peak overpressure level (dBL)	
				Sensitive site	10 mm/s maximum unless agreement is reached with occupier that a higher limit may apply	120 dBL for 95% of blasts. 125 dBL maximum unless agreement with occupier that a higher limit may apply	
			Occupied non-sensitive sites such as factories and commercial premises	25 mm/s maximum value unless agreement is reached with occupier that a higher limit may apply For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specification or to levels that can be shown not to adversely affect the equipment operation	125 dBL maximum value unless agreement is reached with occupier that a higher limit may apply For sites containing equipment sensitive to vibration, the vibration should be kept below manufacturer's specification or levels that can be shown not to adversely affect the equipment operation		
			Heritage infrastructure	3 mm/s if no condition survey is undertaken or up to 10 mm/s if a condition survey demonstrates a higher level is acceptable	120 dBL for 95% of blasts. 125 dBL maximum unless agreement with occupier that a higher limit may apply		
				Implement rem	edial action as soon as possible if	these target levels are exceeded.	
			NV9		time vibration and noise monitor ake remedial action as soon as po	ring to demonstrate compliance with limiossible if limits are not met.	its and publish
		To manage construction	NV10		ction undertake condition assess uction vibration limits with asset	ments of above and below ground utility owners.	assets and
	vibration to protect utility assets			on during construction to demon as soon as possible if limits are r	strate compliance with agreed vibration not met.	limits. Take	

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
			NV11	Ensure that the earthwork preparation for the construction of the Project does not interrupt or in any way interfere with the supply of electricity or gas from SP AusNet.
			NV12	Ensure that peak particle velocity levels from piling, tunnelling, boring or similar activities within the boundary of the West Melbourne Terminal Station are kept below 20 mm/s.
			NV13	Ensure that peak particle velocity levels on any gas pipeline or any underground 220 kV electricity asset is kept below 20 mm/s.
		To manage construction vibration and regenerated noise impacts through community engagement to protect amenity	NV14	Develop and implement a communications plan as part of the Construction Environmental Management Plan for management of potential impacts from vibration and regenerated noise during construction, including notification of affected property owners and land managers in advance of the start of construction.
		To manage construction vibration and regenerated noise impacts to protect the Melbourne Zoo	NV15	Develop and implement management measures in consultation with the Melbourne Zoo and the City of Melbourne for construction works within proximity of the Melbourne Zoo, including management of potential impacts from: • Vibration and regenerated noise; • Construction noise; and • Working hours.
		To minimise the impact of light emissions	L1	Design in consultation with relevant stakeholders to demonstrate how the Urban Design Framework, including the urban design principles, has been met to minimise light spillage and protect the amenity of adjacent land uses, including the Melbourne Zoo and Royal Park.
			L2	Develop and implement management measures in consultation with relevant stakeholders to minimise light spillage during construction to protect the amenity of adjacent surrounding neighbourhoods, parks and community facilities including Melbourne Zoo and urban environments.
Air quality – exhaust	t, dust and greenhouse	gas emissions		
Noise,	Works approval under section 19B	To manage tunnel emissions to protect	AQ1	Undertake a detailed air modelling assessment in accordance with requirements of SEPP AQM using PM _{2.5} and PM ₁₀ as the key indicators for the assessment to inform the final design of the tunnel and tunnel

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
vibration, air emissions and	of the Environment Protection Act 1970	the beneficial uses of the air environment		ventilation system.
light spill – to minimise adverse			AQ2	Design and implement a tunnel ventilation system to meet the best practice (clause 19) and design criteria (Schedule A) requirements of the SEPP (Air Quality Management).
impacts from noise, vibration, air emissions and light spill.				Provide detailed design with technical assessment undertaken in accordance with SEPP (Air Quality Management) demonstrating how the impacts of air emissions on air quality have been minimised to the satisfaction of EPA Victoria, prior to commencement of works. This must demonstrate the application of best practice as defined in the SEPP AQM.
				The design is to provide for the location of the east main ventilation structure at the eastern portal east of Hoddle Street and the railway line.
		To ensure in-tunnel air quality is safe for motorists and others using the tunnel	AQ3	Design a tunnel ventilation system to introduce and remove air from the tunnels to meet in tunnel air quality requirements including the provision for retrofitting of pollution control equipment. Air pollution control equipment be fitted into the tunnel ventilation system if the modelling for the final design shows the PM2.5 and PM10 levels from the vent stack emissions is greater than 30% of the applicable air quality standards.
				Achieve a longitudinal air velocity in the tunnels not exceeding 10 metres/second.
				In tunnel air quality must meet the following CO standards:
				A maximum peak value of 150ppm;
				A 15 min. average of 50ppm; and
				A 2-hour average of 25ppm.
				A mid tunnel air intake structure must be included in the final design.
				After detailed design is finalised prepare and introduce a Design and Development Overlay control into the City of Melbourne and Yarra Planning Schemes to protect the dispersion performance of the ventilation stacks (such controls should be similar in scope to existing controls in those Scheme relating to CityLink ventilation stacks).
		To manage tunnel emissions to protect beneficial uses of the air environment	AQ4	Design the tunnel ventilation system to achieve zero portal emissions during operation.
		To protect beneficial	AQ5	Undertake a detailed air quality assessment of the surface roads to guide the final design and alignment including any viaducts using $PM_{2.5}$ and PM_{10} as the key indicators. Modelling to be done for optimal design

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements	
		East West Link – Eastern Section		to minimise the public health impacts arising from exposure to emissions from the roads.	
			AQ6	Near road emissions (including NO_2 , $PM_{2.5}$ and PM_{10}) to be modelled for the detailed design to demonstrate compliance with SEPP (Air Quality Management) intervention level concentration requirements (Schedule B).	
					AQ7
		AQ8	Monitor the in tunnel air quality and ventilation stack emissions during operation of the ventilation system to demonstrate compliance with SEPP (Air Quality Management) and the EPA licence to the satisfaction of EPA Victoria and report the results publicly on a quarterly basis.		
				Take any required remedial action if targets are not met as soon as practicable.	
			AQ9	Manage construction activities in accordance with EPA Victoria publication 480 Guidelines for Major Construction Sites to maintain air quality to a standard which does not prejudice the air quality of nearby residents, open spaces and community facilities.	
				Develop and implement an air quality management and monitoring plan including dust and construction vehicle emissions to minimise impact of construction to the satisfaction of EPA Victoria.	
		To protect the beneficial uses of the air environment in relation to greenhouse gas emissions	GG1	Integrate sustainable design practices into the design process to identify, implement and monitor measures that will reduce overall greenhouse gas emissions arising from construction, maintenance and operation of the project. Include mandatory actions under the Protocol for Environmental Management (Greenhouse Gas Emissions and Energy Efficiency in Industry) for selection of best practice energy usage for the tunnel ventilation and lighting systems.	
Cultural heritage					
Cultural heritage – to provide appropriate		To minimise impacts on sites of Aboriginal cultural significance	CH1	Comply with a Cultural Heritage Management Plan approved under the Aboriginal Heritage Act 2006.	
protection for cultural heritage.	Permit under section 74 of the	To minimise impacts on sites of historical	CH2	Design permanent and temporary works to minimise impacts on historic cultural heritage in consultation with the relevant local Council.	

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
	Heritage Act 1995	cultural significance		
	to carry out works or activities in relation to a registered place or registered object	To minimise impacts on both known (identified) and unidentified	СНЗ	Develop an archaeological management plan to manage disturbance of archaeological sites and values affected by the project. Undertake investigations in accordance with the Guidelines for Investigating Historical Archaeological Artefacts and Sites, Heritage Victoria 2012 (as amended or updated) and to the satisfaction of the Executive Director, Heritage Victoria.
	Consent under section 129 of the Heritage Act 1995 for impact on	archaeological historic sites and values		Ensure the plan satisfactorily addresses Heritage Victoria's requirements for background historical research, excavation methodology, research design, reporting and artefact management and analysis, and build on historical research to identify opportunities for active interpretation including potential archaeological sites and values within:
	archaeological relics			H7922-0142 Yarra Bend Park Northcote;
				• H7822-2311 Royal Park;
				 H7822-0209 Debney's Park East; and
				 H7822-0312 West Melbourne Rubbish Tips, Dynon Road.
				Incorporate strategies relating to the protection of sites of archaeological interest in relevant masterplans. Consider and investigate further initiatives to build on historical research and provide active interpretation of heritage.
		To protect structural integrity of known	CH4	Undertake condition assessments of heritage buildings or structures prior to commencement of construction and particularly in the vicinity of the following registered heritage sites:
		historic sites and		H0709 Shot Tower, Alexandra Parade, Clifton Hill;
		values		 H1788 Melbourne General Cemetery for all existing gravestones, crypts, memorials and monuments within the project boundary (in plan);
				H1606 Cambridge Terrace, 557-567 Drummond Street, Carlton;
				H1545 Former Police Station complex, 155 Royal Parade, Parkville; and
				H0394 Former College Church, 149 Royal Parade, Parkville.
				Undertake vibration monitoring during tunnel construction in proximity to these sites, and monitor their condition during and post-construction for settlement and structural integrity disturbance as a result of the proposed works. Take remedial action, if required, to the satisfaction of the Executive Director, Heritage Victoria.
		To record historical values of buildings	CH5	Undertake archival photographic records (interior and exterior) of all heritage buildings, streetscapes or places disturbed by the project works, including:

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
		streetscapes, and		• 108-112 Hotham Street, 2-26 Bendigo Street, Gold Street Precinct HO321, Yarra Planning Scheme
		landscapes or relocated/reused small structures if		• 56-58 and 64 Alexandra Parade, 124 Gold Street, 355-367 and 406-420 Wellington Street, Clifton Hill Western Precinct HO317, Yarra Planning Scheme
		feasible that are		Parkville Precinct HO4, Melbourne Planning Scheme to the extent where works are proposed
		disturbed by project		Kensington Precinct HO9, Melbourne Planning Scheme to the extent where works are proposed
		works		 A more detailed assessment of works and impact on significance of the complex at 29-37 Barrett Street, Kensington if disturbed by proposed works
				Arden Street road bridge railing HO814 Melbourne Planning Scheme and consider re-use of the railing if affected
			North and West Melbourne Precinct HO3 to the extent where works are proposed.	
			Prepare measured drawings for the original two-storey section of the Former Box's Curling Works at 64 Alexandra Parade.	
			Maintain set-off as indicated in Reference Project for the former Burge Bros Factory in Precinct 5.	
				Relocate the heritage post box located on the south-west corner of Wellington Street and Alexandra Parade to a suitable location within the precinct in consultation with and to the reasonable satisfaction of the local council, if impacted by project works.
				Undertake an assessment of significant trees and vegetation within Parkville Precinct HO4 adjacent to the project area to identify those to be protected in consultation with the City of Melbourne and develop and implement a Tree Management Plan.
				Retain the row of Elms at Ross Straw Field and protect during project works.
				Replace the Avenue style tree planting along Flemington Road if impacted by works.
				Review direct physical impacts on significant fabric as part of the detailed design for Moonee Ponds Creek and the Infrastructure Precinct.
				Assessment Committee Note: the items in <i>italics</i> above should not need to be disturbed if the primary recommendations are accepted.
Surface water	· 			
Surface water and groundwater – to	Licence under section 67 of the	of the improve existing	SW1	Meet State Environment Protection Policy (Waters of Victoria) for discharge and run-off from the project to the Merri Creek, Yarra River and Moonee Ponds Creek.
maintain the functions and values	Water Act 1989 required to	surface water quality during operation and	SW2	Manage surface water run-off to maintain the stormwater quality, quantity and function provided by the Trin Warren Tam-boore wetlands and associated infrastructure during and post-construction, and replace

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
of affected construct, alter, operate or	construction		the existing irrigation system function and capacity provided by the wetlands and storage tank under Ross Straw Field if rendered inoperative by the Project.	
groundwater.	floodplains and groundwater. decommission works on a waterway, including works to deviate a waterway		SW3	Fully integrate the stormwater treatment system into the design of East West Link – Eastern Section in accordance with VicRoads Integrated Water Management Guidelines (June 2013) and the EPA Best Practice Environmental Management Guidelines for Urban Stormwater (2006) (or as revised); and Where connection to the existing drainage network is needed, the views of the relevant drainage
	Comment from the Secretary pursuant to section 66 of the Conservation,		SW4	authority must be sought and complied with where reasonable and practicable. Any proposed discharge of tunnel waste water from the site must be approved by the relevant drainage authority prior to discharges occurring.
	Forests and Lands Act 1987 on plan of works across waterways.	-	SW5	Develop and implement a monitoring program for run-off from the project to assess compliance with water quality objectives in consultation with the relevant drainage authority and take appropriate remedial action if water quality objectives are not met.
	water ways.		SW6	Design the capacity of the stormwater drainage system to contain hazardous spills to the satisfaction of EPA Victoria, including incident response procedures.
		To maintain existing levels of flood protection	SW7	Permanent and associated temporary construction works must not increase flood levels that result in an additional flood risk associated with Merri Creek and Moonee Ponds Creek, and overland flood flows associated with Alexandra Parade Main Drain as well as tributary drains to both creeks to the requirements and satisfaction of Melbourne Water and in consultation with any other relevant drainage authority.
				Undertake modelling of the design of permanent and temporary works to demonstrate the resultant flood levels and risk profile to requirements and satisfaction of Melbourne Water and in consultation with any other relevant drainage authority.
				Consider potential effects of climate change and sea level rise of 0.8m by 2100, with and without the works for both existing and proposed scenarios (for example future redevelopment in relation to Moonee Ponds Creek within the Arden - Macaulay Structure Plan area) in consultation with the local Council.
				Ensure that surface water from the East West Link – Eastern Section does not encroach on or through the West Melbourne Terminal Station or into underground SP AusNet electricity or gas assets.
		To maintain flood plain storage	SW8	Maintain existing flood plain storage capacity potentially impacted by the project in consultation with Melbourne Water and any other relevant drainage authority to ensure no increase in flood level or frequency during construction or operation of the East West Link – Eastern Section and ancillary works.

CIS evaluation objective	Applicable approval	Performance objective	PR code	Performance requirements
		To maintain flow regime	SW9	Ensure permanent and associated temporary works do not increase flow velocities in Merri Creek or Moonee Ponds Creek that would potentially affect the stability or safety of property, structures or assets including flood levees, and/or result in erosion during operation or construction, to the requirements and satisfaction of Melbourne Water.
		To protect people and assets from flood waters in the tunnel	SW10	Design tunnel portals to exclude surface flows from external catchments during both construction and operation periods; and inform design with a risk assessment that considers a range of events, including assessment of the probable maximum flood. Develop and implement measures and operational plans to manage flood emergency events for the tunnel portals.
		To maintain access to stormwater assets	SW11	Provide adequate clearances and access for ongoing maintenance of Melbourne Water and other drainage authority assets, with a minimum 4 x 4 m maintenance access envelope for sections of Moonee Ponds Creek under proposed elevated structures to the satisfaction of Melbourne Water.
			SW12	Size and design any proposed realignment to the Alexandra Parade Main Drain and Relief Drain to the satisfaction of Melbourne Water.
		To protect water quality and habitat in Merri Creek	SW13	Ensure no works are undertaken in the Merri Creek waterway, bridge piers are to be sited outside of the waterway area and no earthworks are to spill onto the creek banks or into the waterway. Ensure that construction is to be managed so that there are no off site impacts to water quality within Merri Creek and the Yarra River, and that best practice sediment and erosion control measures and appropriate handling of construction materials is included in the environmental management plan for construction.
	To protect the bank stability of Merri Creek and Moonee	stability of Merri	SW14	Develop and implement appropriate measures to maintain bank stability of Moonee Ponds Creek and Merri Creek during construction to the satisfaction of Melbourne Water in consultation with relevant local Councils.
	Ponds Creek	SW15	Design and undertake modifications to Moonee Ponds Creek to minimise the potential for erosion, sediment plumes and exposure of contaminated material during construction to the satisfaction of Melbourne Water in consultation with relevant local Councils. Maximise the visual and aesthetic amenity of the waterway having regard to the concepts of the Moonee Ponds Creek Concept Plan 1992.	
		SW16	Consult with and have regard to the view of the relevant drainage authority in meeting performance requirements SW1 to SW15.	

Groundwater			
Surface water and groundwater – to maintain the functions and values of affected	To protect beneficial uses of groundwater	GW1	Develop and implement measures for management, monitoring, reuse and disposal of groundwater inflows during construction, to the satisfaction of the EPA. Maintain or improve groundwater quality in accordance with the beneficial uses of the groundwater quality as defined by State Environment Protection Policy (Groundwaters of Victoria) and by State Environment Protection Policy (Waters of Victoria).
waterways, floodplains and		GW2	Adopt construction methods that protect groundwater quality, for example:
groundwater.			Use sealing products, caulking products, lubricating products and chemical grouts applied during tunnelling construction that do not diminish the groundwater quality
			Use fluids for artificial recharge activities that do not diminish the groundwater quality
			Ensure compatibility of construction materials with groundwater quality to provide long-term durability for tunnel design life
			 Develop drainage infrastructure that provides for the propensity of dissolved constituents in groundwater to precipitate out of solution and create clogging and maintenance risks.
	To minimise changes to groundwater levels during	GW3	Design tunnel drainage and adopt construction methods which minimise changes to groundwater levels during operation and construction to prevent and manage mobilisation of contaminated groundwater and avoid any other adverse impacts of groundwater level changes.
	operation and construction to		Develop and maintain a predictive numerical groundwater model to:
	manage mobilisation		Inform tunnel design and construction methods;
	of contaminated groundwater		 Assess damming effects potentially created by tunnel on palaeochannels, including potential impact of elevated groundwater levels in the basalt overlying the palaeochannel sediments;
			Assess fate and transport of identified groundwater plumes;
			Assess subsidence potential due to drawdown;
			Assess the potential for interaction with waterways and potential groundwater dependent ecosystems; and
			 Identify trigger levels (groundwater level and quality) and associated intervention actions when trigger levels are reached.
		GW4	Develop and implement a pre-construction, construction and post-construction groundwater monitoring program consistent with EPA Publication 669 (2000) Groundwater Sampling Guidelines, to calibrate and verify the predictive model, manage construction activities and monitor operation during the concession period.
			Develop and implement measures for management of groundwater intercepted during construction,

				including:
				Identification, treatment, disposal and handling of contaminated seepage water and/or slurries including vapours;
				Contamination plume management, particularly associated with the former Fitzroy Gasworks;
				Assessment of barrier/damming effects;
				Subsidence management;
				Dewatering and potentials impacts on acid sulfate soils, including both unconsolidated sediments and lithified sedimentary rock;
				Protection of waterways and potential groundwater dependent ecosystems; and
I				Contingency actions when intervention is required.
		To minimise impact on existing groundwater users	GW5	Undertake an audit of existing bores on properties within 500 m of the alignment to confirm groundwater usage. Develop a plan to maintain water supply to identified groundwater users.
Biodiversity				
Native vegetation and biodiversity – to	Planning scheme amendment under	To protect biodiversity values	B1	Develop and implement measures to avoid, where practicable, and otherwise minimise impacts on native vegetation and fauna habitat through detailed design and construction, including:
maintain the values of remnant native	sections 8, 29 and 35 of the <i>Planning</i> and Environment			Minimising footprint and surface disturbance of temporary and permanent works and constrain works on the Merri Creek;
associated biodiversity.	associated Act 1987			• Fencing defined protected areas and no-go zones along the banks of Merri Creek and within Royal Park, including protection of large scattered trees and the Australian Native Garden, to prevent access during construction. Fencing should be to a standard agreed with the relevant land manager;
Water Act 1989 required to construct, alter, operate or			Development and implementation of a Tree Management Plan for protected trees based on the recommendations of Australian Standard 4970-2009 Protection of Trees on Development;	
			Minimising the removal of mature trees and remnant vegetation;	
	decommission works on a			Managing the spread and introduction of weeds and pathogens during construction including through vehicle hygiene;
	waterway, including works to deviate a	5		Minimising the removal of planted and remnant native trees along the banks of the Moonee Ponds Creek, to the extent practicable;
	waterway. Comment from the Secretary pursuant to section 66 of the		Reinstating areas affected by temporary works and select appropriate vegetation for planting to tolerate the microclimate conditions including under new road structures in consultation with the relevant local council. New and replacement plantings of indigenous vegetation in Royal Park, where practicable, is to use nursery stock grown from seed sources of local provenance; and	

Conservation, Forests and Lands Act 1987 on plan of			The Project must include rehabilitation of all affected areas following construction that meets current best practice standards and be consistent with any adopted management plan for the relevant area.
works across waterways.		B2	Provide vegetation offsets to achieve no net loss, as required, in accordance with the Biodiversity Assessment Guidelines (DEPI, 2013) following the development of the final design.
			The location of any offsets should be as near as possible to the area where the loss has occurred.
			Where works are to occur in the White's Skink habitat area in Royal Park west, undertake salvage of White's Skink prior to works and create appropriate habitat to compensate for the area of habitat removed.
			If works will result in loss or partial loss of the Trin Warren Tam-boore wetlands complex, provide a comparable wetland habitat to compensate for the loss.
		В3	The Construction Environmental Management Plan is to indicate 'no go' zones and provide detail of the measures to be implemented to ensure protection of listed flora and fauna.
	To minimise impacts on Merri Creek and Moonee Ponds Creek	В4	Design of project structures over Merri Creek and Moonee Ponds Creek to minimise additional shading of waterways and select appropriate species for vegetation planting along the waterway under new road structures.
	To minimise impacts on native vegetation and fauna habitat in Royal Park	B5	Develop and implement measures to minimise impacts on native vegetation and fauna habitat in Royal Park, including:
			Temporary works and permanent structures to minimise removal of remnant vegetation in areas surrounding Upfield railway line and Trin Warren Tam-boore wetlands; including avoiding any works north of a line running due east – west across the Ross Straw Field Sports Pavilion between the Upfield Rail Line and Oak Street.
			Temporary and permanent works to minimise removal of scattered remnant trees and non-indigenous hollow bearing trees throughout Royal Park, particularly around Elliott Avenue;
			Minimising footprint and surface disturbance to foraging habitat for Swift Parrot and Grey-headed Flying-Fox; and
			 Minimising removal of habitat for White's Skink and developing and implementing a White's Skink Management Plan, which includes the retention of at least 50% of the White's Skink habitat and replacement through offsetting; monitoring of the salvage plan; and the provision of light screening and baffling where light impacts this habitat.
	To manage interactions with aquatic fauna habitat in Moonee	В6	Design and locate structures to minimise impact on aquatic habitat providing for fish passage in Moonee Ponds Creek and Merri Creek.

	Ponds Creek and Merri Creek where impacts are unavoidable		
Contamination			
Solid wastes – to minimise risks from disturbance and disposal of solid wastes from excavation works, including potentially contaminated materials and acid sulfate soils.	To protect the beneficial uses of land and minimise risk to human health and ecosystems from exposure to contaminated soil	CL1	Develop and implement processes and measures to manage contaminated soil, that must include compliance with: The Environment Protection Act 1970; SEPP (Prevention and Management of Contamination of Land) 2013; The Environment Protection (Industrial Waste Resource) Regulations 2009; Industrial Waste Management Policy (Waste Acid Sulfate Soils) 1999; SEPP (Air Quality Management) 2001; National Environment Protection (Assessment of Site Contamination) Measure 2013; Environment Protection (Scheduled Premises and Exemptions) Regulations 2007; WorkSafe Occupational Health and Safety Regulations 2007 (Asbestos); and Relevant Industrial Waste Resource Guidelines. This must include preparation and implementation of a Contamination Management Plan to the satisfaction of the EPA, which includes but is not limited to the following: Undertaking a detailed assessment prior to any excavation of potentially contaminated areas to identify locations, types and extent of any contaminated land and properties within or adjacent to the project boundary, and areas affected by construction activity outside the project boundary, and assessing the potential impact for human health, environmental risk and odour; Characterising soil prior to disposal or reuse; Identifying soil containing asbestos fibre and if present, developing management strategies in accordance with the WorkSafe Regulations; Identifying suitably licensed facilities for the disposal of contaminated soil; Management of dust and potential stormwater run-off from stockpiled materials; Assessing potential for accumulation of explosive gasses and vapours during tunnelling from soil and groundwater contamination zones; Undertaking a baseline comprehensive site assessment of areas proposed for construction laydown prior to use;

			CL2	 be managed in accordance with requirements of SEPP (AQM); and Minimising cut and cover construction techniques in areas containing asbestos contamination. Develop and implement measures for the management of rock saturated in contaminated groundwater during tunnelling works, to the satisfaction of EPA Victoria, which must include: A management strategy to comply with SEPP (Prevention and Management of Contamination of Land) and SEPP (Groundwaters of Victoria); Identifying the location, extent and type of contaminant of concern in the groundwater resulting in rock saturation associated with tunnel construction activities; and 		
			CL3	Determining treatment requirements, including rock drying and run-off management for spoil handling areas, in accordance with best practice procedures and Melbourne Water guidelines. Develop and implement measures for the management of waste acid sulfate soil material in accordance EPA Victoria publication IWRG 2009, EPA Publication 655.1 Acid Sulphate Soil and Rock 2009, Victorian Best Practice Guidelines for Assessing and Managing Coastal Acid Sulfate Soil; and		
				Undertake an acid sulfate soils risk identification process in accordance with the Victorian Coastal Acid Sulfate Soil Strategy, if soils and rock within project boundary are suspected to be acid sulfate soil/rock.		
		To minimise odour from the excavation and transportation of contaminated material to protect local amenity	CL4	Develop and implement measures for odour management during the excavation, stockpiling and transportation, including: Identifying the areas of contamination that may pose an odour risk; Periodic monitoring of the aesthetics of the material excavated and proposed for transportation; and Segregation and odour emissions assessment with appropriate monitoring equipment if odorous material is identified.		
Waste generation, ha	ndling and disposal					
Solid wastes – to minimise risks from disturbance and disposal of solid wastes from excavation works, including potentially contaminated materials and acid sulfate soils.		To manage all wastes from the construction and operation of the project	W1	Develop and implement management measures for waste_(excluding soils) minimisation during construction and operation, in accordance with the Environment Protection Act 1970 waste management hierarchy and management options, to address: • Litter management		
				 Construction and demolition wastes including, but not limited to, washing residues, slurries and contaminated water; 		
				Hazardous wastes;		
				Organic wastes; and		
				Inert solid wastes.		

	v	W2	No contaminated spoil should be stored on Ross Straw Field or the former Fitzroy Gasworks site or other locations near to sensitive land uses.
Storage and handling of fuels and	chemicals		
Surface water and groundwater – to maintain the functions and values of affected waterways, floodplains and groundwater. Solid wastes – to minimise risks from disturbance and disposal of solid wastes from excavation works, including potentially contaminated materials and acid sulfate soils.	To protect the beneficial uses of air, land and water, and human ecological health, from the impacts of hazardous materials and dangerous goods	HM1	Minimise chemical and fuel storage on site and store hazardous materials and dangerous goods. Comply with the Victorian WorkCover Authority and Australian Standard AS1940 Storage Handling of Flammable and Combustible Liquids and EPA Victoria publications 480 Environmental Guidelines for Major Construction Sites and 347 Bunding Guidelines. Develop and implement management measures for dangerous substances, including: Creating and maintaining a dangerous goods register; Disposing of any hazardous materials, including asbestos, in accordance with Industrial Waste Management Policies, regulations and relevant guidelines; Implementing requirements for the installation of bunds and precautions to reduce the risk of spills; and Developing contingency and emergency response plans to handle fuel and chemical spills, including availability of on-site hydrocarbon spill kits
Environmental Management Plan	s		
		EM1	Prepare a Construction Environmental Management Plan (CEMP) prior to construction of the project, to the satisfaction of the Independent Reviewer, the Independent Auditor, the EPA and The Minister for Planning including: Dust management; Noise management (including operating hours); Sediment and runoff management; Contaminated soil management; Groundwater management; Waste management and materials recovery; Environmental monitoring (dust, fumes, noise, stormwater, groundwater, waste etc); and Communications (including notifications, complaint response, and reporting).

	Prepare an Operational Environmental Management Plan (OEMP) prior to commenceme the project, to the satisfaction of the Independent Reviewer, the EPA and the Minister fo including: Stormwater Management; Tunnel Ventilation Operations; Environmental Monitoring; Remedial Action Plan; and	
		Communications.
	EM3	Appoint an Independent Reviewer and an Independent Auditor to ensure compliance with the Environmental Management Framework and ensure relevant audit reports are made publicly available.

Appendix F: Revised Urban Design Principles



East West Link - Urban Design Principles

1. Design and integration

- 1.1 Provide a high quality, well-resolved design outcome; and a memorable, innovative urban design response which is enduring in expression and timeless in nature, for road users, surrounding land users and for Melbourne as a whole.
- 1.1.1 The design is to make a positive contribution to locally affected environments, and to greater Melbourne's cultural identity and reputation for design innovation, liveability and excellence.
- 1.1.2 The whole of the Project is to be well conceived, carefully resolved and finely executed in detail as a design which is innovative, responsive, engaging, environmentally sustainable, functional, and adaptable for future infrastructure needs.
- 1.1.3 All structural, functional and service elements are to be resolved and integrated in a context sensitive manner as part of the urban design solution.
- 1.1.4 Spaces associated with or created by the project are to be optimised through careful siting of structural elements to facilitate spatial useability and access where appropriate.
- 1.1.5 The design is to ensure particular attention to successful integration and responsiveness to the existing landscape(s), and urban environments, cultural heritage, land use, the character and integrity of key precincts along the alignment, and the overall coherence and identity.
- 1.1.6 Design of new structures at the Melbourne CityLink Gateway are to enhance the urban design of the precinct and contribute to a redefined and heightened gateway and multi-modal interchange experience.
- 1.1.7 Incorporate sustainable design approaches into the Project as a whole, and to its elements. Consider materials for the design that minimise embodied energy use, and consider whole-of-life energy and water costs for the Project.
- 1.1.8 Protect and enhance public viewlines and vistas where appropriate.
- **1.2** Provide a high quality outcome for residents and adjacent private and public land users and land owners with respect to protection of views and privacy, noise amelioration, avoiding overshadowing, and maintaining access and security through design.
- 1.2.1 A distinctive character and sense of journey for both the freeway and other integrated transport modes is to be created through a holistic landscape, architectural and urban design response to the whole project including the project organisation development of a palette of forms, treatments and materials for all elements:

- 1.2.2 Roads, waterways, parklands and necessary bridges and elevated structures (vehicular, pedestrian, cycling, and public transport).
- 1.2.3 Tunnels, tunnel portals and ventilation structures.
- 1.2.4 Noise barriers, retaining walls, fencing and safety barriers.
- 1.2.5 Pedestrian and cycle paths, including all crossings.
- 1.2.6 Earth forming, planting and open space elements.
- 1.2.7 Associated urban design elements including signage, lighting and any furniture.
- 1.3 The form, finishes and siting principles for all road and street furniture, lighting, signage housings and other miscellaneous items are to be established at the concept stage of the design. These should be rationalised to minimise visual clutter, and designed as integral to the urban design concept.
- 1.4 The siting and design of walls and other elements and the choice of materials, colours and surface finishes is to avoid them becoming a target for graffiti. A graffiti management strategy is to be prepared and implemented for the road and the open space network for the life of the Project.
- 1.5 Any works within the Moonee Ponds Creek corridor is to enhance the creek environment for open space, amenity and habitat values, contribute to integration of water catchment management, and to be in accordance with Melbourne Water requirements for flood protection. These works are to be determined in conjunction with the Cities of Melbourne and Moonee Valley.
- 1.6 The architectural, landscape and urban design works are to be designed to ensure an environment which is accessible, inclusive, supports safe behaviour, and is perceived as being safe.

2. Bridges and elevated road structures

- **2.1** Bridges or elevated road structures are to contribute to an experience of gateway or provide landmark thresholds where they are appropriately located to serve this purpose. They are to be respectful of context and well-resolved in response to existing landmark urban elements, and they include:
- 2.1.1 Melbourne Gateway at CityLink including existing sculptural, landscaping and sound attenuation elements.
- 2.1.2 Eastern Gateway at Eastern Freeway including proximate heritage elements such as the Shot Tower.
- 2.1.3 Western Gateway at Footscray Road / Docklands Highway.
- 2.1.4 Secondary thresholds and interchanges including the tunnel portals.
- **2.2** Minimise the extent and impact of elevated road structures.
- 2.3 All elements of elevated structures, including associated services and lighting are to be designed to minimise their visual and spatial impact, while achieving high levels of visual, acoustic and spatial amenity and character of the streets and open spaces

- they intersect, and to the identity of the project as a whole.
- **2.4** All bridges and elevated road structures are to be integrated design solutions in terms of their form, elements, proportions and details, having regard to their location and urban context. Structural solutions must integrate visual and spatial architectural and urban design considerations to ensure visually elegant and contextually-appropriate structural outcomes.
- 2.5 The design of areas under elevated structures is to be carefully designed and fully resolved to maximise their usefulness and amenity, particularly for public open space and access to natural light. Ensure uses or activities to be located under or near elevated structures are suitable for such locations having regard to environmental considerations. Carefully site or align piers or support structures to optimise the useability and positive urban qualities of undercroft spaces.
- 2.6 there is no additional overlooking of private open space and habitable room The designs of new road structures in Royal Park or other public open space locations are to ensure that the landscape character of the place is dominant and that visual and physical severance is minimised. The form, scaling, expression, materials, connections, details and finishes of structures must be developed as innovative, sensitive and responsive elements that contribute to the character, identity and positive experience of the parkland, and prepared in conjunction with the managers of that open space.
- **2.7** Ensure windows of residents potentially affected by the Project.
- 2.8 Any new road structures connecting with the Arden-Macaulay urban renewal area are to be integrated with the local movement system and be consistent with the Structure Plan and to the satisfaction of the City of Melbourne.

3. Tunnels

- 3.1 The design and visual presence of tunnel portals and structures are to be sensitive to their urban context while making a positive contribution to the road's identity as a whole and to the local environments, through high quality form, expression, scaling, detail and materials.
- **3.2** Tunnel interiors, lighting and surface finishes are to contribute to the urban design quality and memorable experience for users of the East West Link. Tunnel interiors should optimise road safety, driver experience and be easy to maintain and designed to avoid surface staining.

4. Ventilation structures

- 4.1 Ventilation structures are to be designed to be sensitive responses to their urban context and deliver high quality architecture including form, expression, finishes and detailing.
- **4.2** Ventilation structures are to be sensitively sited with due consideration given to the environment and amenity impacts within their immediate and surrounding urban context.

4.3 Ventilation structures are to be designed to make a positive contribution through their form, scaling and detail, as innovative responses to the local environment and to the road's identity as a whole.

5. Noise attenuation

- **5.1** Noise barriers and noise mounds are to be designed as compatible elements with the structures, landform and urban interfaces of their location and urban design concept for Project as a whole.
- **5.2** Overshadowing of residential properties and open space, waterways and valuable habitat by noise barriers or other noise attenuation structures is to be minimised.
- **5.3** Transparent panels are to be considered in locations near to residential property where noise walls substantially interfere with the aspect or view, or access to daylight.
- **5.4** Design noise barriers to positively address both the road side and community side of barriers.
- **5.5** Design to minimise potential for vandalism to noise attenuation treatments, through materials selection, detail and positioning.

6. Pedestrian and bicycle connections

- **6.1** New pedestrian and bicycle paths are to maintain and extend current local connectivity, including linking to relocated and new community facilities, open spaces and urban renewal areas.
- **6.2** Maximise opportunities to create and enhance pedestrian and bike paths that provide for local connections and linkages to co-ordinate with the wider Principal Bicycle Network.
- **6.3** Extend and enhance existing at grade pedestrian and bike connections, including along and across Hoddle Street, Alexandra Parade and Moonee Ponds Creek, and identify locations where new connections would be advantageous.
- 6.4 Maximise opportunities to enhance connectivity of the Yarra Bend Trail, Capital City Trail and Moonee Ponds Creek Trail with other existing trails to improve and extent the network.
- 6.5 Improve way finding convenience and legibility of access between and along streets and to key destinations where new road infrastructure will impact on existing connections and at new connections.

7. Public realm, parkland and recreation

- **7.1** Design is to ensure no permanent loss of public open space, and increase open space of various types and functions to ensure a net increase and community benefit.
- **7.2** Design is to minimise the removal of mature trees and remnant vegetation and protect parkland character. At Royal Park, this includes minimising design ornamentation at the Elliott Avenue interchange to respect and respond to the

- surrounding landscape character. It also includes, where practicable, screening of excavated works and structural elements by subtle 'layering' of vegetation, with replanting programmes to conform to the 1984 Royal Park Master Plan. All such works to be designed in collaboration with the City of Melbourne.
- **7.3** Maximise opportunities to create or enhance open space, community and recreation facilities, and to improve accessibility, inclusiveness and general amenity for the community, including:
- 7.3.1 Merri Creek open space link in the vicinity of the new road structures.
- 7.3.2 The connection from Yarra Bend Park to Alexandra Parade by the proposed relocation of Groom Street/Trenerry Crescent Overpass.
- 7.3.3 Reinstatement and enhancement of the landscape character of Royal Park and Moonee Ponds Creek Linear Park
- 7.3.4 Playing fields, recreation spaces, wetlands and associated areas of Ross Straw Field and Moonee Ponds Creek Linear Park facilities.
- 7.3.5 The recreation facilities, community centre, community gardens and associated areas of Debney's Park.
- 7.3.6 The edges of Ormond Park, Holbrook Reserve and Moonee Valley Racecourse.
- 7.3.7 Moonee Ponds Creek as an urban parkland, waterway and walking/cycling and habitat corridor between Royal Park and Docklands, through the Arden-Macaulay and E-Gate urban renewal precincts and north between Racecourse Road and Ormond Road within the East West Link alignment.

8. Planting and vegetation

- **8.1** The design is to ensure a net enhancement of the landscape amenity and biodiversity of areas along the corridor and nearby parklands affected by the Project.
- **8.2** Design is to achieve a substantial net increase in tree canopy and contribution to the urban landscape across the corridor. Plant selection, design and layout are to:
- 8.2.1 Present a coordinated colour, form and texture palette which is integral to the urban design concept.
- 8.2.2 Be well-implemented with appropriately selected species that ensures a low maintenance, thriving and enduring outcome. Avenue trees removed to accommodate new road alignments including along Flemington Road, replacement trees shall, where practicable, be of the same taxon and on an alignment and at a spacing as close as possible to the trees removed.
- 8.2.3 Maximise performance, long term viability and contribution to the landscape character, amenity and design concept as a whole by considering local conditions and existing character, microclimates and uses.
- 8.2.4 Maximise use of indigenous and native species, where viable in the context of microclimate and character.
- 8.2.5 Where planting is proposed, employ a process for maintenance to ensure net

increase in tree canopy is met.

Materials and finishes

- **9.1** The detailed design of buildings and road structures is to integrate:
- 9.1.1 Materials and details that will allow reasonable ease in repair, replacement or recoating and maintains design character, expression and features to age gracefully.
- 9.1.2 Colour and texture which is integral to any materials, not the result of applied finishes, or, if applied, is demonstrably highly durable and able to be repaired with ease, and appropriate to maintaining the longevity of urban design concept.
- 9.1.3 Provide accessibility and functionality for ease of maintenance.

10. Lighting

- **10.1** Lighting and lighting structures, poles and masts are to be designed as an integral element of the urban design concept for the whole Project to ensure functionality and efficiency are achieved.
- **10.2** Consider special lighting for major infrastructure, interchanges, gateways, movement corridors and 'moments', to contribute to way-finding and legibility, and the creation of memorable experiences for all users.
- **10.3** Design is to provide lighting for pedestrians and cyclists to the parkland, places and paths created around and under the new road infrastructure, where appropriate.
- **10.4** Design is to use highly directional lighting wherever possible to avoid lighting spill into surrounding neighbourhoods, parks and urban environments.
- **10.5** Use energy efficient, vandal proof light fixtures that offer ease of access for maintenance.

11. Water Sensitive Road Design

- **11.1** Integrate Water Sensitive Road Design into urban design solutions to achieve sustainable water and resource management.
- **11.2** Employ best practice treatment of water run-off through swales and biofiltrations systems as appropriate.
- **11.3** Include water harvesting for roadside landscape and open space irrigation, wherever possible.
- **11.4** Consider measures to mitigate the urban heat island effect through effective urban design.
- **11.5** Maximise permeability opportunities within road and associated hard landscape areas.

12. Integrated public artworks

- **12.1** Undertake a programme to incorporate public artworks at suitable locations across the Project that are responsive to the character of the urban setting, and which, where appropriate, are integrated into the wider design as functional elements of the overall design philosophy.
- 12.2 Institute a public art programme to ensure that the public artworks are considered at an early stage of the design process with adequate funding. Opportunities for artistic expression should be an integrated element of the overall design and the Project's infrastructure. The sequencing of 'landmark' artworks should be carefully considered to relate to 'choice points' where the freeway is exited.
- **12.3** Consider the incorporation of a series of smaller public artworks associated with the shared user paths and other movement routes.
- **12.4** Where public artworks are proposed, employ a process for selection, commissioning, implementation and maintenance that ensures the works are of a high quality, appropriate to location, and will endure.
- **12.5** Involve the local communities to contribute to the design and selection of appropriate local art through one or more 'artists in residence' or similar programs.



Appendix G: Report of Dr Sandy Bennet



Planning Panels Victoria

EAST WEST LINK

COMPREHENSIVE IMPACT STATEMENT (CIS) ASSESSMENT COMMITTEE

Report by

Flagstaff Consulting Group Pty Ltd

Consolidated Advice on Review of Expert Reports and Critical Tunnelling Issues

May 2014

Privileged and Confidential

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1. Introduction

Following instruction on 26 February 2014 by Ms Kathryn Mitchell, Chair, East West Link Assessment Committee (AC) of Planning Panels Victoria (PPV), Dr Sandy Bennet of Flagstaff Consulting Group (FCG) undertook a review of particular Expert Reports prepared in response to the Directions of the EWL AC issued on 20 January 2014. Dr Bennet was engaged to assist the AC in matters relating to Tunnelling, Hydrogeology and Geomechanics and has reviewed the CIS documentation and the Section 57(4) responses by Linking Melbourne Authority (LMA) relating to those technical disciplines.

A number of critical tunnel issues for East West Link planning are described in Section 3 of this advice, but it should be recognised that other tunnelling issues have to be addressed later in the design and construction phases of the project when a specific alignment and construction methodology has been adopted.

The Preliminary Consolidated Advice of March 2014 has been amended in light of further information available to the AC during the Public Hearing. Specific matters reviewed in this advice are the responses by three Expert Witnesses to the FCG Preliminary Consolidated Advice, heard on 12 March 2014 at the Public Hearing (Tabled Documents 84, 86 and 90), the LMA Response to the DDO Query by FCG (Tabled Document 439) and the East West Link (Eastern Section) Performance Requirements LMA Final Version (Tabled Document 525).

The instructing letter is attached in Appendix A.

Accordingly those reports submitted to the AC on 20 February 2014, prior to the commencement of the Public Hearings scheduled from 3 March 2014, reviewed were:

• Mr T Anderson Hydrogeology GHD for LMA

Dr J Heilig Vibration and Regenerated Noise Heilig & Partners for LMA

Assoc. Professor J Webb Hydrogeology La Trobe Univ. for City of Yarra.

Other Expert Reports pertaining to road design by Messrs Brock and Higgs as listed in the initial letter of instruction are not covered in this review, as they did not canvas any issues relating to tunnelling, hydrogeology or geomechanics and subsequent advice from PPV confirmed this action. In the Public Hearing on 12 March 2014, Dr Nadebaum made comment on the FCG Preliminary Consolidated Advice, thus a response is given in Section 2.4.

The review of critical risk areas for tunnelling evolved from consideration of the CIS documentation in relation to the technical disciplines where the AC was seeking assistance and identification of the factors which could have adverse impact for the project.

1.1 Expert Advisor Details and Statement

1.1.1 Expert Advisor Details

Expert advisor details have been included as Appendix B.

1.1.2 Report

I do not believe the advice is incomplete or inaccurate in any respect.



1.1.3 Declaration

I have made all enquiries that I believe are desirable and appropriate and that no matters of significance (save those covered by legal professional privilege) which I regard as relevant have to my knowledge been withheld from the Assessment Committee in this review.

1.2 Abbreviations

The following abbreviations have been used throughout this consolidated advice:

AC Assessment Committee AECOM Australia Pty Ltd

CIS Comprehensive Impact Statement DDO Design & Development Overlay

EPA Environment Protection Authority Victoria

EWL East West Link

EPB Earth Pressure Balance

EPDM Ethylene Propylene Diene Monomer - Synthetic Rubber

EWS Expert Witness Statement

FCG Flagstaff Consulting Group Pty Ltd LMA Linking Melbourne Authority

MTPFA Major Transport Projects Facilitation Act

NYM North Yarra Main

PPV Planning Panels Victoria RFI

Request for Information

SKM Sinclair Knight Merz TBM

Tunnel Boring Machine



2. Expert Witness Statements

2.1 Mr T Anderson

2.1.1 Expert Witness Statement

The EWS by Mr Anderson is to be taken in combination with the task performed in collating, analysis and interpretation of existing groundwater information in preparation of the Technical Report (Appendix M of the CIS).

Further work by Mr Anderson comprised review of:

- 1. SKM, 2013: East-West Link Stage 1 Preliminary Hydrogeological Investigation. Final Interpretive Report. October 2013.
- 2. GHD, 2013: East West Link. Preliminary Assessment of Potential Inflows and Drawdowns Drained Tunnel and Portals. Report prepared for Linking Melbourne Authority.
- 3. Hutchinson, B.J., and Lamb, I.A., 1999: *Construction Management of the Hydrogeological Aspects of the Melbourne City Link Project*. Tenth Australian Tunnelling Conference, Melbourne 1999.

The SKM report (Final Interpretive Report) cited by Mr Anderson apparently post-dates the issue of the CIS Appendix M and has not been available to the AC, but the SKM assumption of a fully drained tunnel would give an overestimate of potential inflows as Mr Anderson states on p. 1 of his EWS. The assessment of impacts to Royal Park vegetation will require further attention when tunnel design and construction methods are finalised in Mr Anderson's view and this step is appropriate. This is a consequence of the method of project delivery requiring the constructor to resolve such matters.

The GHD report noted above was to inform the project specification regarding potential inflows associated with drained tunnels and excavations, particularly west of Royal Parade and the eastern portal area (Hoddle Street). This report considered by Mr Anderson has not been sighted by the AC, but Mr Anderson states further assessment of impacts on Royal Park vegetation was recommended. This matter is commented upon below.

The paper by Hutchinson and Lamb reflects knowledge gained during design and construction of the City-Link tunnels to the time of the publication in 1999. Whilst Mr Anderson claims a number of groundwater related issues on the CityLink project reinforce the appropriateness of the Performance Requirements for East West Link, care should be exercised in the comparison. Of the notable information listed under eight dot points by Mr Anderson on p. 3 of the EWS, some are generalisations of information in the paper referenced and the penultimate paragraph acknowledges that some significant geological and hydrogeological differences exist between the two alignments. The absence of Moray Street Gravels and Coode Island Silt over the majority of the length of the East West Link is positive factor, but the presence of palaeovalleys is a matter that needs better understanding. Whilst the indicated construction methods differ from those adopted on CityLink, the possibility of intersection with aguifer systems has to be addressed further.

Mr Anderson also provided a response to the Submissions allocated for his review and stated that generally the issues raised had been addressed in the Technical Report and did not affect the findings and opinions expressed in the Technical Report. A more comprehensive response to some issues has been given in the Appendix C of the EWS.



As a consequence of his review, the Performance Requirements GW3 and GW4 have been augmented to address:

- potential for interaction with waterways and potential groundwater dependent ecosystems (in GW3)
- protection of waterways and potential groundwater dependent ecosystems (in GW4).

Both additions improve an aspect of these Performance Requirements relating to groundwater, but they both would be further improved by re-drafting to clearly follow the design, construction and operational phases of the project in a logical sequence.

Other than the augmentation of GW3 and GW4 recommended by Mr Anderson, further commentary has been provided on the potential effects of damming aquifers by tunnel construction. Referring to p. 21 of the EWS, Mr Anderson acknowledges that the potential for damming to occur *and* (italics by Anderson) to result in adverse impacts is unknown, but is considered by him to be low. Mr Anderson maintains this view on the basis of six lines of evidence listed on p. 21-22, but the evidence needs elaboration:

- What is the evidence to support the statement that even a lined tunnel has some albeit small leakage e.g. < 0.1 L/m ² through the tunnel surface?
- How many pumping tests have been completed in areas of the identified palaeovalleys?
- What is the level of confidence that migration around the tunnel structures or pressures to be redistributed up-gradient within the palaeovalleys will occur, without more rigorous modelling and calibration?

The geological longitudinal section indicates near complete or complete obstruction of the palaeovalleys at a number of sections between Smith Street and Rathdowne Street.

However, Mr Anderson finally adopts the view that the damming potential should be investigated through numerical modelling when a tunnel design is in preparation, but this approach may suffer from insufficient time to calibrate such a model and have sufficient field data to validate its reliability before project commitment.

Mr Anderson also discusses the potential for subsidence, particularly the effect of dewatering of the palaeochannel sediments. Unless the sediment properties have been properly assessed by testing, and no evidence has been provided to the AC apart from SPT blow counts on the borehole logs indicated on the geological longitudinal section, more investigation and analysis will be required to provide reasonable assurance that the various causes of subsidence noted by Mr Anderson are ameliorated by the measures indicated. A closed face TBM as indicated should handle such conditions, but the suggestion of remedial grouting through segments would only be considered as a last resort. TBM performance requirements and design strategies are the more appropriate responses.

On p. 24-25 Mr Anderson comments on concerns expressed in seventeen (17) Submissions regarding damage to dwellings, other buildings and public assets resulting from ground movement and interference with the water table. The response advanced that Melbourne Formation siltstone and Newer Volcanic basalts are not compressible materials is appropriate, but under-drainage of these materials where a high watertable exists can cause changes in moisture content of overlying clay soils and if they are reactive, a different outcome results. The "learning" from CityLink noted by Mr Anderson concerns inter-aquifer connection, and whilst in a different hydrogeological regime and the outcome of intersection with a water-charged palaeovalley may be less dramatic for East West Link, the present state of knowledge as presented in the CIS is sparse.



Over most of the alignment, water levels are greater than 5 m below the surface. However, where water tables in the Newer Volcanic basalt aquifer are sufficiently high enough contribute to capillary rise in the overlying soils, changes in groundwater levels could influence soil moisture, and thus behaviour of reactive soils.

Changes in groundwater levels where watertables in the Newer Volcanics are high, as noted in the response by Mr Anderson on p. 25 in paragraph 4 (shown above), indicates possible soil moisture influence and hence behaviour of reactive soils. The GHD (2013) report cited (and not available to the AC) suggests preliminary estimates of settlement were low. However, if a large open cut excavation is utilised to form the approach to the tunnel portals, desiccation of the near-surface clays overlying the Newer Volcanics basalt in proximity to the eastern portal may result in settlement. The potential for difficulty in apportioning responsibility for cause of damage in older structures liable to seasonal effects with the influence of nearby construction also needs to be considered.

The response by Mr Anderson in relation to the example of groundwater management on CityLink (p. 26) is generally correct, but the statement that the high groundwater inflows in turn resulted in failure of the concrete invert slabs is incorrect. The initial invert slab failure followed the rise in groundwater level following completion of the tunnel secondary lining causing pressure increase. After anchoring of the concrete floor-slabs, following a number of failures induced by pressure testing of the slabs by the contractor and subsequent grouting of the surrounding rock mass, recovery of the groundwater system was initially achieved by use of recycled groundwater, from the tunnel drainage system, in recharge wells. Following clogging by precipitation of salts from the introduced groundwater in the recharge wells, potable water was utilised until restrictions introduced by Melbourne Water during the prolonged drought, and cost and other influence necessitated the use of recycled treated groundwater.

Knowledge of the palaeovalleys immediately north of the project alignment might be usefully gleaned from Melbourne Water's construction records for construction of relieving sewers in the Merri Creek and Darebin Creek sewer catchments. Both creek valleys overlie palaeovalleys buried by Newer Volcanics basalt and it is understood water inundation and accidents occurred on several of these minor tunnelling projects in relation to water bearing palaeochannels.

2.1.2 Response to FCG Preliminary Advice

The Tabled Document 90 prepared by Mr Anderson principally addressed hydrogeological issues raised by FCG.

Mr Anderson provided a long explanation in general terms relating to the suggested re-drafting of the GW3 and GW4 Performance Requirements by FCG. The key point intended by FCG was to avoid overlap between the construction and operational phases. The Performance Requirements GW3 and GW4 still do not appear to be concise and could be improved by re-drafting to address the construction and concession phases separately.

In relation to damming effects, Mr Anderson provided a long response to three issues raised by FCG. The evidence provided by Mr Anderson to support the statement that even a lined tunnel has some, albeit small leakage e.g. < 0.1 L/m² through the tunnel surface relies on the SKM Interpretative Hydrogeological Report (2013) and the classification system devised by Alfred Haack of STUVA in Germany. The Haack Classification is a guideline only and was developed many years ago, before the widespread introduction of membrane systems and modern sealing systems for segmental lined tunnels.



Mr Anderson responded to the FCG question regarding the number of pumping tests performed in relation to the understanding of flow in the palaeovalleys by stating only one test had been the basis of the opinions expressed in the CIS. Access issues during the investigation phase were cited as a reason for lack of further information and additional investigation bores have been completed subsequent to issue of the CIS, and additional pumping tests have been requested by the bidding parties. Mr Anderson also cited the absence of investigation bores off the Reference Project alignment and that the recent drilling has targeted some of the issues relating to improving the understanding of the geological model. This information has not been provided to the AC so no opinion can be offered.

Mr Anderson provided a long explanation regarding the level of confidence that migration around the tunnel structures or pressures to be re-distributed up-gradient within the palaeovalleys will occur. On the basis of the information provided in the CIS, and without access to the information garnered by the more recent investigations, there is still a risk that without more rigorous modelling, analysis and calibration to understand the groundwater flow in the palaeovalleys and their path relative to the tunnel profile, the potential issue of damming may arise.

In relation to the contention by FCG that the present state of learning concerning the inter-aquifer connection is sparse, Mr Anderson concedes FCG is correct and further pumping tests are being undertaken. The AC has not been updated with this further work.

The commentary by Mr Anderson on the FCG opinion that a closed face TBM, as indicated by the CIS documentation should handle such conditions, and TBM performance requirements and design strategies are the appropriate responses, does not address the issue. The suggestion of remedial grouting through segments is stated in the CIS and FCG firmly believes this would only be considered as a last resort. The Performance Requirements should have taken geotechnical and tunnelling advice into account in their preparation and not be reliant on control measures developed later.

In relation to desiccation of near-surface clays overlying the Newer Volcanics at the Eastern Portal, Mr Anderson asserts that changes to the groundwater table are unlikely to affect moisture content in the unsaturated zone above. However, the fact remains that the near-surface clays will be subject to drying if left exposed in the open cut ramp and portal areas for substantial periods of the duration of construction and could affect nearby property.

Mr Anderson acknowledged that his knowledge of the CityLink tunnels is confined to a selection of technical papers and relies on minimization of changes to groundwater levels during construction and operation by the design process for East West Link tunnels.

Mr Anderson refers to the EWS by Assoc.Professor Webb and the potential for damming to result in increased groundwater levels in the basalt, with resultant increased ingress to the NYM. Although Mr Anderson suggests this was an outcome of the Expert Conclave, and amendment to the performance Requirement GW3, the LMA Final Version (p. 18 of 23 dated 15 April 2014) does not specifically note potential for increased ingress of groundwater to the NYM. Mr Anderson recognizes the possibility that relining or realignment may result in less ingress into the NYM and tunnel designers will need to consider this potential effect on lining design for East West Link tunnels, resulting from a rise in the groundwater level in this vicinity.

The pressure and volume of groundwater to be managed should not be taken to be mitigated by the possible adoption of a modern TBM with earth pressure balance or slurry technology capability. This statement by FCG in the Preliminary Consolidated Advice of March 2014 has not been specifically addressed by Mr Anderson and still stands. Failure of large TBM's is a matter of great impact on a project and the wider community and the risk can be minimized by better understanding of the geotechnical and hydrogeological conditions. The current delay in the Alaskan Way Project in Seattle should be a strong reminder



that every reasonable step should be taken in understanding of ground conditions, before invoking groundwater monitoring and numerical modelling as mitigation measures.

Mr Anderson provided commentary on the FCG proposition that the NYM may be both acting as a drain to draw down groundwater and a source of leakage of sewage. He states VicRoads has implemented a groundwater level monitoring programme but he is not aware whether a groundwater quality monitoring programme has been implemented. Mr Anderson believes the Performance Requirement GW4 addresses the issue with a requirement to comply with EPA Publication 669 (2000).

The response to the FCG opinion (Preliminary Consolidated Advice of March 2014) that in order to make a properly considered response to the potential of damming, it is essential to develop the groundwater model, by very experienced hydrogeological specialists, to test its sensitivity and reliability prior to project commitment, Mr Anderson contends that it is likely bidders have already begun developing numerical models to inform their selection methods. No confirmation of this action is available to the AC.

Mr Anderson does not address the potential issues regarding aggressive groundwater on lining systems and drainage systems and indicates the Performance Requirement GW2 is proposed for the contractor to account for this. FCG is strongly of the opinion that suggesting enlargement of the drainage infrastructure is not an adequate design approach, given the typical groundwater chemistry and its propensity for precipitation of calcium salts.

The commentary by Mr Anderson concerning the FCG comments on the Langelier Index is incorrect. The Langelier Index is temperature dependent and this should not be misinterpreted as control of groundwater temperature, which would be near impossible. The further discussion on microbiological clogging misses a key issue of tunnelling in Melbourne Formation, where the groundwater chemistry is dominant in determining the likely corrosion or clogging response, depending on the weathering state of the rock mass.

In relation to comments by FCG on groundwater sampling, Mr Anderson refers to the SKM (2013) report. It is noted by Mr Anderson that the groundwater sampling programme needs to be consistent and defensible and that the EPA Publication 669 (2000) should be followed.

2.2 Associate Professor J Webb

The EWS by Assoc. Professor Webb was prepared on the instruction of Harwood Andrews acting for the City of Yarra.

Specifically Assoc. Professor Webb was instructed by Harwood Andrews as follows:

- a. Whether the assessment methodologies adopted by GHD for the Groundwater Impact Assessment (GIA) and Contaminated Land Assessment (CLA) and described in Section 5 of each report provide an appropriate framework for the assessment of potential groundwater impacts and contaminated land ricks associated with the Project?
- b. Whether you consider the investigations undertaken by GHD and described in section 4.2 of each report were appropriate and adequate?
- C. Whether you agree with the impact ratings assigned by the GIA, and summarised in Table 14, to groundwater impacts from the Project, in particular in relation to impacts in Precincts 1 3?
- d. Whether you agree with the impact ratings assigned by the CLA, and summarised in Table 8, to contaminated land risks from the Project, in particular in relation to impacts in



Precincts 1 - 3?

- e. Whether you consider the impacts and risks associated with the Project are consistent with the applicable legislative and policy frameworks?
- f. Whether you consider the Performance Requirements and mitigation activities identified in the GIA and CLA provide an adequate framework to ensure that impacts and risks associated with the project are acceptable?
- g. The Comprehensive Impact Statement and the submissions provided by the various Councils affected by the project identify a number of alternative design options for the Project. In your opinion, would any of these alternative design options provide a better outcome, from a groundwater impact /contaminated land perspective, than the Reference Project design?

Assoc. Professor Webb had no issues with the framework for the assessment of potential groundwater impacts and contaminated land risks associated with the Reference Project, although he did not specifically define it as such, rather calling it the Project as noted in the Harwood Andrews instructions.

He considered the investigations undertaken by GHD are generally adequate, but noted minor differences in the geological maps (Appendix M Fig. 2, SKM 2013 and the Geological Survey of Victoria Bulletin 59). The differences are minor and arise because Bulletin 59 (in Imperial units and published in 1959) predates the extract of the plan used in Appendix M (in SI units and published in 1974), whilst the SKM version appears to be a redrafted compilation.

The commentary on the risk ratings summarized in Table 14 of Technical Appendix M indicates Assoc. Professor Webb does not agree with the GW003, GW004 and GW010 assessments. In relation to these assessments, Assoc. Professor Webb does not elaborate on his reasons for amending the likelihood, except to note GW003 may depend on results of modelling.

Whilst not within the matters of tunnelling, hydrogeology and geomechanics, the view of Assoc. Professor Webb relating to the Contaminated Land Assessment under C005 has relevance to acid sulphate rocks liable to be excavated from tunnel sections exhibiting slightly weathered or fresh Melbourne siltstone or sandstone. Whether the EPA identification procedures and management strategies will apply for East West Link will have to be resolved with EPA.

Assoc. Professor Webb comments on the Performance Requirements GW3 and GW4 on p. 9 of the EWS. He particularly comments on the damming effects potentially created by the tunnels and possible elevation of groundwater levels in the basalt overlying the palaeochannel sediments that will be dammed and the need to assess any impacts of the higher watertable such as increased groundwater inflow to the NYM. Assoc. Professor Webb's suggested rewording of the Performance Requirement GW3 has merit and should be considered by LMA and its advisors.

Assoc. Professor Webb also considers augmenting the wording of Performance Requirement GW4 to include both unconsolidated sediments and lithified sediments as indicated in his italicized text (p. 5) under Instruction 6. This addition should also be seriously considered by LMA and its advisors.



Notwithstanding the previous two paragraphs, the earlier comment regarding the clarification of logic noted in the commentary on the EWS by Mr. Anderson regarding GW3 and GW4 still applies.

Assoc. Professor Webb has singled out the three broad risks identified in the Groundwater Impact Assessment:

- Damming effect caused by the tunnels
- Presence of contaminated groundwater
- Subsidence caused by changes to groundwater levels.

Assoc. Professor Webb has noted the east-west alignment of the tunnels crosses the trend of the palae-ovalleys and will completely block groundwater flow within the sandy sub-basaltic sediments within one of the palaeovalleys. The pumping test by SKM (2013) on these sediments obtained a surprisingly low permeability value and Assoc. Professor Webb believes there will nevertheless be a significant impact on groundwater flow when the palaeovalley is completely dammed by the tunnels. A comprehensive groundwater modelling exercise is required to understand the implications.

The high risk rating assigned in Chapter 14 of the CIS for this issue is correct in Assoc. Professor Webb's view and by the author of this Consolidated Review.

Assoc. Professor Webb also notes the depression in the groundwater attributed to leakage into the NYM along Alexandra Parade. Any damming will most likely increase drainage into the NYM sewer. The prospect of mitigation by up-gradient pressure relief wells indicated by Assoc. Professor needs careful consideration because of the need for their longevity without undue recurrent cost.

Assoc. Professor Webb correctly notes the impact of the contaminated groundwater associated with the former Fitzroy Gasworks as identified by GHD. He also notes the legacy problems associated with gasworks can be substantial.

In relation subsidence caused by changes to groundwater levels, Assoc. Professor Webb has highlighted that the sub-basaltic sediments may have an impact if dewatered. Despite the expectation of LMA that the (overlying) basalt rock will act as a raft and mitigate against ground movements, Assoc. Professor Webb believes modelling is needed to confirm this will be the case. The final comment by Assoc. Professor Webb in relation to this issue that LMA have drawn on CityLink experience for Coode Island Silt has little bearing for most of the East West Link (Eastern Section) as no Coode Island Silt has been identified, although it will impact the Port Link and the interchange with CityLink near the Moonee Ponds Creek.

Assoc. Professor Webb was not called upon to present to the Assessment Committee and did not make comment upon the FCG March 2014 Preliminary Consolidated Advice.

2.3 Dr J Heilig

2.3.1 Epert Witness Statement

The EWS by Dr Heilig is to be taken in combination with the task performed in preparation of the Technical Report (Appendix K of the CIS). Dr Heilig was tasked to identify appropriate performance criteria and undertake an assessment of the expected effects in terms of vibration and regenerated noise in con-



structing the reference project using methods that would be consistent with commonly employed practices.

Subsequent to completion of the Technical Report, Dr Heilig has undertaken further preliminary work in relation to the possible effect of the vibration induced by tunnel construction on the well-being of animals within the Melbourne Zoo. He has not located any articles of definite relevance in a literature search apart from material concerning animals subjected to transport induced vibration. The relevance of this material is questionable in Dr Heilig's opinion and further work in this field is warranted.

Dr Heilig also indicates preliminary modelling shows vibration generated by construction activities will be minimal and is expected to have a negligible effect on the welfare or behavioural patterns of animals housed in pavilions compared to the other sources of vibration to which they have already been exposed.

Nevertheless, Dr Heilig recommends that a specific programme be developed in collaboration with Melbourne Zoo staff regarding the monitoring and definition of permissible levels of vibration. How this might be developed is not stated.

The further work has not caused Dr Heilig to materially change the opinions expressed in the Technical Report (Appendix K).

The EWS then discusses the Submissions allocated to Dr Heilig and the five (5) common themes he identified in the submissions reviewed were:

- Concern regarding structural damage to dwellings that would occur from the vibration produced by construction activities
- Concern regarding subsidence to the area above the tunnel caused by the vibration produced by construction activities
- Concern regarding the loss of amenity for residents around the construction areas that would occur as a result of the vibration and regenerated noise produced by construction equipment
- Concern regarding the potential impact of the vibration by construction activities on the health and well-being of the animals at the Melbourne Zoo
- Concern regarding an inability to assess the possible impacts based upon a reference design and not necessarily the final implemented design.

Dr Heilig then addresses the following matters in turn:

- Vibration damage
- Personal Amenity
- Monitoring and Reporting of Vibration

He maintains the performance criteria are based on Australian Standards and further justified by comparison to other peer reviewed international papers. Thus he is of the view that the possibility of damage to properties arising from the vibration generated during the construction phase is effectively nil.

He notes examples of other environmental influences such as humidity change or routine daily weather phenomena that produce far greater stresses than the equivalent stress level induced by a level of vibration compliant with the proposed performance criteria are given. However, the humidity change of 20% would not be a rapid response as compared to a vibration pulse. Furthermore, unless the condition surveys are sufficiently detailed and susceptible structures are identified, reduction in the level of allowable peak particle velocity might not be realised.

Thus while Dr Heilig believes the possibility of damage is effectively nil, the advice goes on to note it is entirely appropriate to assess all infrastructure through a condition survey and reduce the vibration criteria where the structure is shown to be susceptible. Dr Heilig is not entirely consistent in Paragraph 2 on



p. 3 of his EWS. He notes the Australian Standard AS2187.2-2006 does not impose a more restrictive vibration criterion for heritage infrastructure, but rather considers it to be adequately protected by vibration criteria appropriate for recently constructed infrastructure.

It is questionable whether construction practices can be micro-managed to accommodate specific structures in proximity to the works that have been identified as susceptible to vibration damage or manage the possible increase in vibration limit where infrastructure has been identified to be in a sound condition, as Dr Heilig suggests.

The compaction of loose subsoil leading to settlement and consequently structural damage to buildings has been recognised, however, Dr Heilig discusses acceleration values, which are not proposed for East West Link criteria and notes acceleration values must generally exceed double the maximum performance criteria to cause settlement. The confusion of velocity and acceleration should be clarified.

The issue of extent of condition surveys raised in some submissions elicits a response from Dr Heilig that it should be determined according to the type of equipment used. The view of Dr Heilig is that it can either be determined according to a set distance from the works or according to the expected level of vibration, generally a percentage of the minimum performance criteria.

There is no disagreement that the equipment type dictates the extent but in a major tunnel project the most severe vibration output controls the criteria, given various equipment will be utilised the excavate the mainline tunnels and cross passages as well as shafts and the approach ramps. If only a set distance from the works is adopted within which condition surveys are undertaken, sensitive or susceptible structures may be ignored, whilst geological conditions and groundwater levels also can influence the distance from the construction works liable to experience vibration. For this reason, the two-way protection has to be carefully assessed in developing the extent of condition survey reports. Currently there is no guidance offered to indicate the extent to be adopted for condition surveys.

Personal amenity is discussed at the foot of p. 3 of Dr Heilig's EWS. The magnitudes discussed by Dr Heilig relate to tables in the Executive Summary of his Technical Report (Appendix K) but are not entirely consistent with the Table 17-2 of the Environmental Management Framework of Chapter 17 of the CIS and the Performance Requirements NV8 and NV9. The Day (16-hour day) limit expressed by Dr Heilig for residential is 1mm/s to 2 mm/s (p. iv of 112 and p. 16 of 112 of Appendix K) which corresponds to "low probability of adverse comment". There is also inconsistency in the Night and Evening terminology in the Technical Report on the same page.

Monitoring and reporting of vibration is discussed on p.4 of this EWS. The response in the first three paragraphs is consistent with typical accepted practice. The time of operation of particular equipment or activities may have to be amended or controlled, but given the current uncertainty of the Reference Project as to methods, further comment is not possible. The statement by Dr Heilig that prior to commencement of any activity that induces measurable levels of vibration, a vibration assessment is undertaken and the activity confirmed as being able to comply with performance criteria is endorsed.

Dr Heilig sees no reason to support the imposition of different compliance limits proposed by his work in preparation of the Technical Report. As the Performance Requirements are expressed in Chapter 17 of the CIS, there may be a need to be more specific in defining the terms Day and Night of the Performance Requirement NV8 to avoid misunderstandings.

The response to Submissions allocated to Dr Heilig is given in Appendix C of his EWS. Only those matters specific to tunnelling, hydrogeology and geomechanics are considered.

The condition of the NYM is described as the first issue requiring the setting of an appropriate limit of vibration to be determined in consultation with Melbourne Water. The response suggests the need for pro-



tection work between Manholes 48 and 50 is not resolved. If construction activities cannot meet the 5 mm/s vibration limit, the option of relining may be a possible solution. However, Dr Heilig continues by stating there is no guarantee that Melbourne Water will allow an increase in permissible level of vibration. The response continues by stating that preliminary assessment of the NYM between Manholes 52 to 50 has confirmed the option of relining appears very difficult and not feasible based upon a reduced flow capacity the reduced diameter would create.

It is thus possible the Reference Project may have to be adjusted to accommodate a solution in terms of Part 7 of the MTPFA such as:

- 1. Increase the separation from the NYM by re-alignment of the East West Tunnels to reduce the impact of tunnel construction, or
- 2. Address the feasibility of realignment of the NYM given its age and the prospect of utilising more ductile materials in a replacement.

The City of Melbourne Submission raised the issue of where the tunnel is under heritage assets, structural integrity of buildings must be assessed prior to construction and reassessed after. Dr Heilig responded that he recommends that all heritage infrastructure is assessed through a condition survey and where the infrastructure is susceptible to vibration, the vibration criteria should be adjusted accordingly. Where heritage infrastructure is shown to be sound by a condition report, the vibration limit that is applied in relation to construction activities generating impulse vibration is 3 mm/s to 10 mm/s. It is not certain whether Dr Heilig is addressing the City of Melbourne concern regarding assets rather than infrastructure.

The City of Yarra has expressed their submission in terms of Council issues and Residents issues. Dr Heilig has responded to the issue of difficulty in proving tunnelling vibration caused damage by indicating a vibration related or damage complaint would be addressed by review of both the photographic and written records to determine whether the defect (damage) existed prior to the works. The reliance on photography and the possible limitations imposed by respecting privacy can be overcome by detailed written condition surveys with documented measurements of existing defects.

The recommended Modified Performance Requirement as proposed by City of Yarra have merit (NV8, NV9, NV10 and NV11) (refer p. 13 of EWS), and described in the Appendix C of the EWS by Dr Heilig.

The response by Dr Heilig to the issue raised by RATS concerning measurement of noise and vibration by the contractor being unacceptable has not addressed their concern. Dr Heilig makes no mention of audit by others and most likely a specialist consultant would be engaged by the contractor for these tasks of monitoring. It is possible this can be stipulated as a Performance Requirement.

The comment by Dr Heilig relating to Submission 536 (Slater & Gordon) that the performance criteria proposed necessarily prohibits damage to infrastructure is a bold statement.

The comment by Dr Heilig relating to Submission 682 (Flemington Association) notes modelling of the expected levels from pile driving activities will be determined prior to construction proceeding. It is possible that compliance with the proposed performance criteria may not be met, given the proximity of some of the buildings adjacent to the Port Link and alternative piling solutions will be necessary.

2.3.2 Response to FCG Preliminary Advice

The Tabled Document 84 prepared by Dr Heilig addressed ground vibration issues raised by FCG in the Preliminary Consolidated Advice of March 2014. In particular, Dr Heilig commented on seven issues raised:

Applicable Standard

Dr Heilig has purported that heritage infrastructure should neither necessarily nor automatically be subjected to a lower permissible level of vibration. This is consistent with the current Australian Standard



AS2187.2. He contends that such structures should be assessed and on the basis of the assessment and susceptibility to damage, an appropriate vibration limit determined. The indicated approach thus ranges from susceptible structures which are addressed by the German Standard DIN4150 to "typical" structures addressed by AS2187.2. The outcome by following Dr Heilig's advice is dependent to the approach taken by the constructor, i.e. whether to undertake a generic condition assessment with no consideration of the structure's susceptibility to vibration and thus apply the DIN4150 limits, or adopt a more detailed investigation aligned with best practice as per AS2187.2 and possibly a higher vibration limit.

In summary, Dr Heilig notes that the Performance Requirements indicated are adequate for the majority of residential properties, some infrastructure such as the Shot Tower should be reviewed in greater detail to determine the vibration limit.

- Analysis, Modelling and Measurement of Vibration
 - Dr Heilig notes the analysis, modelling and measurement of vibration levels from construction is almost exclusively undertaken by assessing the vibration level in the velocity domain. He recommends that all vibration monitoring for the project report values in the velocity domain and only for specific studies should acceleration values be noted. FCG notes and accepts these comments.
- Condition Surveys
 - Dr Heilig has proposed that the extent of condition surveys can be determined according to either a set distance from the works or based upon the distance at which a given level of vibration is predicted to occur. No specific distances are given, nor can this be determined until construction methods are determined, the Project Boundary is defined in terms of the adopted project and the geological anomalies and other factors, as indicated by Dr Heilig are given due consideration in determining a sufficiently conservative extent.
- Personal Amenity
 - Given the difficulty of defining a level of vibration acceptable to personal amenity, Dr Heilig references the Australian Standard AS2670.2 and notes the range of permissible values. There is no acknowledgement that in the Performance Requirements as expressed in Chapter 17 of the CIS, there may be a need to be more specific in defining the terms Day and Night of the Performance Requirement NV8 to avoid misunderstandings. Whilst he acknowledges that the NV8 Performance Requirement refers to continuous vibration to protect personal amenity, he also notes the caption above the table incorrectly references AS2817.2 instead of AS2670.2. This reads AS2187.2 as given in the LMA Final Version of the Performance Requirements (p.8 of 23).
- Vibration Levels for Utility Assets
 - Dr Heilig notes that an appropriate level of vibration for some utility assets should be determined through a structural assessment in consultation with the asset owner. The commentary is general in nature and suggests differing levels for different assets and possibly for different contractors depending on their quality assurance procedures, monitoring methods, early warning measures and planned mitigation measures.

Although preliminary discussion has been held with Melbourne Water concerning the NYM, no significant progress can be achieved until a preliminary design alignment is adopted by the Project Co. and negotiation can commence regarding acceptable vibration levels pertaining the NYM. Similar comments apply to the major HV transmission line of SP AusNet crossing the alignment at Clifton Hill and the HP gas main also in the ownership of SP AusNet.

In relation to the proximity of the elevated structure of the proposed Port Link adjacent to the CityLink elevated structure, SP AusNet made a succinct submission to the AC at the Public Hearing relating to their West Melbourne Terminal Station on 27 March 2014 (Day 18). Besides physical proximity and construction space requirements, SP AusNet highlighted their concerns relating to vibration affecting their switching facilities and transformers and their intended major business upgrade to meet the critical electricity demand of a major section of the CBD. Preliminary discussions with SP AusNet have not satisfied their concerns and negotiations will be difficult to advance until a Project Co is appointed.



Performance Criteria

Dr Heilig notes that he believes the possibility of structural damage from the construction activities is effectively nil as the vibration levels will controlled by performance criteria that are heavily biased towards personal amenity rather than prevention of damage. He believes it is an appropriate precaution to undertake condition surveys to:

- i. Provide assurance to the contractor against inappropriate claims of damage, or
- ii. Provide support to the property owner in the event the contractor employs inappropriate construction practices.

The critical issue in any consideration of assigning limits for either transient or continuous vibration is compliance, and no amount of documentation of Performance Requirements can surpass understanding and ensuring compliance at all levels of the construction team.

Vibration Management Plan

Dr Heilig notes that monitoring and reporting of vibration levels will be completed in accordance with a Vibration Management Plan. As stated in the text immediately above, compliance is the key to success in maintaining a working relationship with all stakeholders and avoiding damage or nuisance complaints.

Whilst Dr Heilig suggests subsequent monitoring, whether completed by the contractor or independent consultants, will comply with the Plan specifications. It is a bold presumption by Dr Heilig that monitoring alone will achieve the desired outcome, and again the necessity for compliance is emphasized.

It is suggested that as part of the function of the intended role of the Independent Reviewer to be jointly appointed by LMA and the Project Co, the vibration monitoring role should be administered by an independent specialist sub-consultant. This would provide transparency and independence of the vibration monitoring role.

2.4 Dr P Nadebaum

2.4.1 Expert Witness Statement

The EWS of Dr Nadebaum was not reviewed, as it was not within the scope of the FCG Brief.

2.4.2 Response to FCG Preliminary Advice

The Tabled Document 86 prepared by Dr Nadebaum principally addressed contamination plume issues raised by FCG. Dr Nadebaum focused on four matters raised in the FCG Preliminary Consolidated Advice of March 2014 pertaining to the former Fitzroy Gasworks site.

• FCG noted inconsistencies in the description of the extent of the plume by AECOM and SKM.

Dr Nadebaum stated FCG had not been specific as to the nature of the inconsistencies and had difficulty in understanding the nature of the concern. The AECOM and SKM reports available to the AC via the CIS and Section 57(4) response gave differing descriptions of the plume. The URS Audit Report and other information available to Mr Darryl Strudwick, noted by Dr Nadebaum, were not available to the AC. The additional on-going investigations by SKM and GHD should also provide further information on the extent and migration of the contamination plume, but this information was not available to the AC and FCG.

The further work by GHD on behalf of LMA may provide additional information regarding contamination at the expected depth of the tunnels and the contaminant concentrations at tunnel depth will be manageable and consistent with the observations of the Audit Report that contamination reduces rapidly with depth. However, this information has not been available to the AC.

• FCG noted the synthetic rubber seals (EPDM) between the segment circumferential and longitudinal faces of the segmental liner blocks may be subject to attack by hydrocarbon derivatives.



EPDM exhibits satisfactory compatibility with fireproof hydraulic fluids, ketones, hot and cold water, and alkalis, and unsatisfactory compatibility with most oils, gasoline, kerosene, aromatic and aliphatic hydrocarbons, halogenated solvents and concentrated acids.

Dr Nadebaum notes this effect relates to more concentrated solutions of aromatic hydrocarbons, and at the tunnel depth the EPDM seals would not be compromised. Notwithstanding this statement by Dr Nadebaum, it would be prudent to ascertain with potential suppliers of EPDM seals their opinion of the longevity of their product, given the very long design life of the tunnel segmental lined structure in the intended environment.

• FCG noted that if a slurry TBM is utilised, the contaminated slurry represents a considerable problem in recycling the slurry after separating the tunnel spoil, which should be addressed prior to selection of a TBM and commencement of TBM operations. Use of an EPB TBM does not experience the same potential issue of contaminated slurry, but might experience contaminated spoil handling issues and the attendant risks of workplace safety, storage and transport and disposal.

Dr Nadebaum suggested a Slurry TBM may give rise to large volumes of contaminated spoil and groundwater. If the Slurry TBM is operated in an appropriate manner there should not be a significant inflow of groundwater to the slurry. The point of the FCG comment was that recycling the slurry after removal of the rock spoil in the spoil handling plant can lead to either build-up of concentration of contaminants in the slurry returned to the machine or cause breakdown in slurry performance and hence a large volume of contaminated slurry to be disposed, particularly if contaminated plumes are traversed.

FCG noted the strategy of ascertaining the extent, and the direction of migration of the plume if
it is mobile may not be resolved until project commitment occurs. This approach could have a serious adverse impact on the project programme.

Dr Nadebaum's response is to indicate it is for the constructor to resolve any potential issues of ground-water flow by appropriate selection of the tunnel boring method or use of a hydraulic barrier. Major changes to a TBM necessitated by ground conditions or installation of a hydraulic barrier cannot be readily mobilized quickly nor modifications readily effected, even if the migration precipitated by tunnelling is a slow process, hence the potential for a serious adverse impact on the project programme.

Dr Nadebaum believes the concern raised regarding attack on the EPDM seals is probably overstated by FCG, but there was no readily available evidence in the CIS and the subsequently available reports suggesting low concentrations of aromatic hydrocarbons. Dr Nadebaum concedes the possibility of greater concentrations could be found in practice (although unlikely), and would be usefully raised in the selection and evaluation of the tunnel boring method and materials.



3. Critical Tunnel Issues for EW Link

3.1 Planning Scheme Amendment GC2

3.1.1 Melbourne Planning Scheme

Part of the draft amendment prepared by LMA is documented in Schedule 62 as indicated below:



MELBOURNE PLANNING SCHEME

....J..../201 GC2

SCHEDULE 62 TO THE DESIGN AND DEVELOPMENT OVERLAY

Shown on the planning scheme map as DDO62

EAST WEST LINK PROJECT AREA

1.0

Design objectives

- To ensure that the development of land above the East West Link tunnel is not adversely affected by the construction or operation of the tunnel.
- To ensure that the development of land above the East West Link tunnel does not adversely affect the construction or operation of the tunnel.
- To ensure that the Roads Corporation is informed of development above the East West Link tunnel and to facilitate comment by that authority on any specific requirements relating to the development to the extent that it impacts on, or is adversely affected by, the construction or operation of the tunnel.

2.0/../201 9C2

Buildings and works

A permit is not required to construct a building or construct or carry out works if the building or works are less than 15 metres below ground level.

Notice of an application must be given under Section 52(1)(c) of the Act to the person or body specified in the Schedule to Clause 66.06.

An application is exempt from the notice requirements of Section 52(1)(a), (b) and (d), the decision requirements of Section 64(1), (2) and (3) and the review rights of Section 82(1) of the Act.

3.0

Subdivision



A permit is not required to subdivide land.

4.0 Decision guidelines



Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- The impact of the construction or operation of the tunnel on the development of land above the tunnel.
- The impact on the construction or operation of the tunnel from the development of land above the tunnel.

DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 62

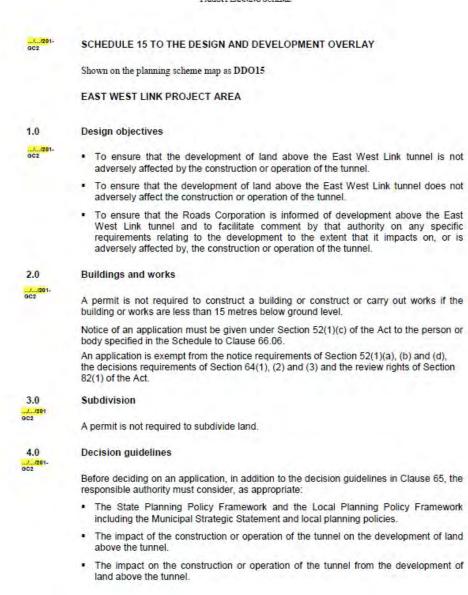
PAGE 1 OF 1



3.1.2 Yarra Planning Scheme

A similar amendment is proposed by LMA in relation to the City of Yarra Planning Scheme:

YARRA PLANNING SCHEME



DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 15

PAGE 1 OF 1



The critical issue for both the Melbourne and Yarra Planning Schemes is the impact of construction or operation of the tunnel on the development of land above the tunnel or vice versa. Whilst the vertical and horizontal alignment of the tunnels is not finalised, the key issue is the dimension of twin tunnels (15m diameter approximately with a separating pillar) in relation to probable depth of cover, the varied geotechnical conditions and the proximity of development. The Roads Corporation needs the ability to be able to rigorously check any development in proximity to the East West Link tunnels on the basis of all material factors and not only as a design objective. A prescriptive dimensional criterion as proposed (15m) does not capture the complexity of tunnels, the geotechnical conditions and the scale of any intended development.

Prior to vesting the tunnel structures in the Roads Corporation, the mechanism to protect both the tunnels and future private development in proximity during the Concession period needs to be considered. This is a legal/legislative issue for others to determine.

A rigorous analytical assessment taking into account the interaction of any development, including basement construction, loading, footing systems and geotechnical conditions with the tunnel structures. This approach serves all parties best interests and has been utilised on another major tunnel project in an urban environment, the Melbourne Underground Rail Loop. The MURLA Act of 1970 (Section 30 et seq), its amendment of 1973 (Section 4) and the subsequent Transport Act (Section 54) contained clauses to protect the Loop. These provisions are still relevant to the Loop tunnels and are currently administered by Vic Track. Development of properties along or in the immediate proximity of the Loop has never been stymied by these provisions, and should be considered by LMA to protect the interests of all parties.

3.2 LMA Response to DDO Query by FCG

Following the comment made above in Sections 3.1.1 and 3.1.2, LMA arranged for a meeting in their office to explain their approach to the DDO and the General Principles for Permit and Referral Requirements. A formal response to the AC was Tabled Document 439 on 11 April 2014 (Day 28 of Public Hearing). The LMA will not be in a position to confirm the extent of the application for the proposed DDO until the vertical and horizontal alignment has been confirmed as part of the detail design process.

Whilst the DDO Framework is proposed to be implemented once the extent of the tunnel alignment is confirmed in the 4th quarter, 2014 according to LMA, it is doubtful the detail design process will be sufficiently advanced to finalise the Project Boundary by that time and hence the necessary legal and legislative processes.

The LMA in their response to the AC (Tabled Document 439) commented as follows on the DDO Framework:

The text below is copied verbatim from the Tabled Document 439.

"It is also appropriate to ensure protection of the construction and operation of the tunnels and future development of land above the tunnels through the introduction of a Design and Development Overlay (DDO) for both the Yarra and Melbourne Planning schemes.

Following review of the tender requirements and exhibited DDO provisions, it is proposed to modify the DDO provisions to ensure a more robust framework exists to ensure the protection of the tunnels from future development and vice versa through the introduction of a referral mechanism to the LMA where appropriate. As project authority, the LMA will be a determining referral authority under the *Planning and Environment Act 1987* in respect of the land within the project area, pursuant to section 102A of the *Major Transport Projects Facilitation Act 2009.* Accordingly, it is appropriate that the LMA be specified as the referral authority in the DDO and not Roads Corporation.



Outlined below is an overview of the proposed framework.

Design Objectives

- To ensure that the development of land above the East West Link tunnels is not adversely affected by tunnel construction or operation.
- To ensure that the development of land above the East West Link tunnels does not adversely affect the construction or operation of the tunnels.
- To ensure that the Roads Corporation is informed of development above the East West Link tunnels and to facilitate comment by that authority on any specific requirements relating to the development, to the extent that it impacts on, or is adversely affected by, construction or operation of the tunnel.

General Principles - Permit & Referral requirements

It is proposed that two new DDO schedules be introduced to both Yarra and Melbourne Planning Schemes to ensure protection for the tunnels and for future land development. Outlined below are key principles that would provide a mechanism to ensure that, where appropriate, permit applications are referred to the relevant Referral Authority (in this case the LMA) for comment.

Schedule X - General Tunnel Alignment —generally from Smith Street to Royal Parade (to be confirmed during the detail design process)

The **key principle** is to ensure that any future development leg deep piled foundations and basement excavations which may cause substantial unloading and lateral/vertical movements) does not impact on the construction and operation of the tunnel.

For implementation into the DDO schedule, the draft provision could specify that any future development does not require a permit provided it is less than 2.5 metres below the ground level and less than 7.5 metres in height

Schedule XX - Tunnel transition areas (either end of the tunnel) — (to be confirmed during the detail design process)

The key principle is to ensure that any future development does not impact on the tunnel transition areas (i.e. where the tunnels transition to ground level).

For implementation into the DDO schedule, the draft provision could specify a permit is required to construct a building or carry out works.

This DDO framework will meet the design objectives outlined earlier through the provision of an appropriate referral mechanism to the LMA.

Timing

LMA will be in a position to confirm the extent of the application for the proposed DDO once the vertical and horizontal alignment of the tunnel has been confirmed as part of the detail design process.

Accordingly it is proposed that the Design and Development Framework outlined above be implemented once the extent of the tunnel alignment is confirmed in the 4th guarter, 2014."



The text above relating to the Referral Authority has been highlighted, because if the LMA is to be specified as the Referral Authority in the DDO, it is not appropriate that the Roads Corporation is informed of development above the East West Link tunnels and to facilitate comment by that authority on any specific requirements relating to the development, to the extent that it impacts on, or is adversely affected by, construction or operation of the tunnel.

It is also not sufficient to only to be informed and facilitate comment, without power to protect the structural integrity and functionality of the tunnels.

In relation to future development in the vicinity of the tunnels, LMA provided the following advice in the meeting in their office on 19 March 2014 and would not release the technical information for commercial-in-confidence reasons at the time, but subsequently confirmed same in Tabled Document 439.

The text below is copied verbatim from Tabled Document 439.

"The tender documentation provides for this issue, as follows:

Future development

Future development of the land above and adjacent to the tunnels or other underground structures must be allowed for by designing and constructing for loading in addition to the design loads applicable to the support of the tunnel excavation. The additional loading requirements are as follows:

- (a) Driven tunnels and adjoining underground structures must:
 - (i) allow for a building vertical load of:
 - (A) 50kPa working load acting on the ground at a level of 1m above the tunnel crown and in uniform and patterned (including symmetrical and unsymmetrical) arrangements which give the most unfavourable loading condition on the tunnel; and
 - (B) 20kPa equivalent to a build-up of the surface level with 1m of fill,
 - and design must allow for the loadings in (A) and (B) to be applied together and separately; and
 - (ii) retain a pillar of a minimum 7m width between the side wall of the tunnel and any adjacent building excavation.
- (b) Cut and cover tunnels and adjoining underground structures must allow for a surcharge of 25kPa with a load factor of 1.5 from future building or other development. This loading must be applied at the level of the top of the tunnel roof.
- (c) All tunnels and adjoining underground structures must:
 - (i) allow for additional loadings from developments which have been approved by the relevant Authority, current at the date of the Agreement; and
 - (ii) also be assessed and the underground structures designed to avoid any impacts on these developments."

Again it is necessary to be specific as to the Relevant Authority and the meaning of the date of Agreement, to avoid any misunderstanding.



3.2.1 Commentary

There are two approaches possible in protection of both tunnels and property development in proximity:

- Design the tunnel structures for the existing load and ground conditions, with appropriate contingencies for change in groundwater level. Any future development is required to take into account the presence of the tunnels in proximity and be designed accordingly to not adversely affect the tunnels.
- Design the tunnel structures as above, but stipulate additional loading requirements to allow for future development.

The tender documentation by LMA adopts the latter approach described above, but in spite of the design intent, given earlier on p. 24:

- To ensure that the development of land above the East West Link tunnels is not adversely affected by tunnel construction or operation.
- To ensure that the development of land above the East West Link tunnels does not adversely affect the construction or operation of the tunnels.
- To ensure that the Roads Corporation is informed of development above the East West Link tunnels and to facilitate comment by that authority on any specific requirements relating to the development, to the extent that it impacts on, or is adversely affected by, construction or operation of the tunnel,

there may be situations where the load cases of a proposed development are not covered by the clauses relating to Future development in the Tender documentation.

One particular example is the unloading effect caused by excavation of a substantial basement either symmetrically or asymmetrically over the tunnels or in close proximity. The current framing of the tender documentation makes no allowance for this situation and resolution by the Relevant Authority will be difficult to manage.

The likelihood of construction of segmentally lined tunnels is high. Given their form and the manner in which they function, any substantial unloading and particularly asymmetrically can have dire consequences, particularly where the depth of cover is low.

Another example where the loading requirements may be subject to dispute is the possibility of bored or driven piles forming part of basement construction or a structural element of a multi-storey development in proximity. Currently there is no provision to address how to protect the tunnels from pile skin friction or vibration effects of developments in proximity.

3.3 Interface with Utilities

Although comment on the North Yarra Main sewer and its influence on groundwater and surrounding ground is contained in the following section, it must be recognised that the ovoid sewer was constructed about 1896 and various sections have required repair to maintain its function. It is a critical item of Melbourne's sewer infrastructure, transmitting sewage from the north eastern suburbs to Spotswood, Brooklyn and ultimately the Western Treatment Plant at Werribee. The Reference Project alignment indicates the NYM sewer is in proximity to the west bound tunnel of the East West Link for approximately 1050m, from passing over the tunnels near Queens Parade to running in parallel to Lygon Street before diverging under Cemetery Road East.

Protection of the sewer integrity is vital to both construction of the East West Link tunnels and Melbourne Water operations, thus the development of adequate guidelines for the benefit of both parties needs to be advanced as a matter of priority. The proposed amendment to the DDO as drafted by LMA is only intended to address property development on land above the East West Link tunnel. The interface with



utilities is covered by Part 7 of the MTPFA, and the NYM proximity and function will be a significant matter for resolution.

3.4 Palaeovalleys and groundwater

3.4.1 Palaeovalleys

The regional geology through which the East West Link tunnels are to be driven has been briefly described in the CIS (Chapter 14 and Appendix M). Palaeovalleys containing groundwater have been identified in the Melbourne region and described in various publications (Geological Survey of Victoria plans (Bulletin 59, 1967), Geology of Victoria (latest edition) published by GSA¹ (pp. 590-591 by W A Peck)).

The recent geotechnical drilling investigation for LMA has confirmed a number of palaeovalleys cross the tunnel alignment between the possible eastern portal location and Lygon Street. These are related to the ancestral streams forming tributaries to the ancestral Yarra River. (Refer Figure 3 Sheet 2 of 2, Tunnel Longitudinal Section (East) Part2). The subsequent lava flow within the last few million years from the north has buried these ancient valleys and produced the land form witnessed currently.

The construction of the North Yarra Main (NYM) sewer approximately 120 years ago under Princes Street experienced flooding of an access shaft (at approximately EWL Ch. 6020m) immediately west of Canning Street. The "sandy clay strata" described on the geological longitudinal section noted above most likely was the source of the inflow and despite the advances in technology since construction of the NYM, the prospect of buried watercourses has to be better understood. The pressure and volume of groundwater to be managed should not be taken to be mitigated by the possible adoption of a modern TBM with earth pressure balance or slurry technology capability. Currently the information pertaining to the palaeovalleys is limited and testing of storativity and transmissivity should be augmented. The prospect of intervention to restore TBM tunnelling operations under busy suburban streets, if adverse conditions or machine failure occurs, is a risk that must be mitigated.

Reference to the tunnel geological longitudinal section (Figure 3 Sheet 2 of 2, Tunnel Longitudinal Section (East) Part2) illustrates the drawdown effect caused by the leakage of groundwater into the NYM sewer in the section between Queens Parade and Lygon Street. This has been noted in the interpretive report by SKM² provided by LMA in response to the Section 57(4) RFI. A final issue of this report is referenced by Mr T Anderson in his EWS, but has not been provided to the AC.

Careful scrutiny of the "As Constructed" records of the NYM sewer held by Melbourne Water in their historical records may reveal other evidence of construction difficulties experienced on the NYM sewer as regards ground conditions or groundwater.

A matter that requires further investigation is the brief commentary noted on the geological longitudinal section (Figure 3 Sheet 2 of 2, Tunnel Longitudinal Section (East) Part2) relating to sulphur odour and yellow staining. Logs for Boreholes EWL-B12-039 and EWL-B12-008 note these effects but no commentary expanding on their presence has been found in any document available to the AC. There is good reason to identify if these effects relate to leakage from the NYM sewer as the boreholes are near the respective limits of the zone where the NYM is in proximity to the tunnels as indicated by the Reference Project (Ch. 5454 to Ch. 6500). If leakage is the cause, further consideration of maintaining the integrity of the NYM sewer is essential, given its critical function in transmission of sewage from a large metropolitan area.

¹ Geological Society of Australia, *Geology of Victoria*

² SKM East West Link Preliminary Hydrogeological Investigation DRAFT INTERPRETIVE REPORT August 2013 p.86



3.4.2 Groundwater

The influence of groundwater should principally be confined to the construction phase and the use of a closed face TBM is intended to ameliorate its effect. Once the tunnels are built, and providing the designed form of the tunnel meets water-tightness criteria, the groundwater table should not be adversely affected. However if problems arise in the construction and the lining fails water tightness requirements, long term problems persist.

These problems manifest themselves in several forms:

- Leakage which may cause deterioration of the lining through corrosion or corrosion of tunnel services (lighting, cabling, signage, ventilation fans)
- Leakage which has to be handled by the tunnel drainage system and may react chemically
- Leakage which impacts on serviceability and safety (wetting of pavement).

In the former category, the structure corrosion impacts on the design life of the tunnel whilst the tunnel services may have to be replaced considerably earlier than intended.

The second category relates to drainage capacity or maintenance issues and recurrent cost over the life of the tunnel.

The last category results in functionality issues that may have significant impact on operation.

The issue of potential damming of the groundwater southward migration by the tunnel structure is raised in the CIS and Technical Appendix M. The mitigation measure indicated is to develop a groundwater model and monitor groundwater levels during construction. Both actions will not commence until the project commitment has occurred and the design and construction teams are mobilized. In order to make a properly considered response to the potential of damming, it is essential to develop the groundwater model, by very experienced hydrogeological specialists, to test its sensitivity and reliability prior to project commitment. The model has to be able to realistically test intended construction sequences and methods, and not make simplistic assumptions such as taken to date (e.g. "unlined tunnel" in the Preliminary Hydrogeological Investigation DRAFT INTERPRETIVE REPORT, when commentary in the CIS and Technical Appendices indicates a closed face tunnelling system is likely).

3.4.3 Groundwater chemistry

The groundwater chemistry has been reported in several reports available to the AC but opinion on its effect on tunnel structures, and concrete segments in particular, has not been offered.

Comparison with other major tunnel projects (road and rail) in the Melbourne Formation siltstone and sandstone would be a very useful exercise and would inform the design of the East West Link tunnel. The potential for precipitation of calcium and iron salts from the groundwater should now be better understood in that it poses a risk to adequacy of the operating tunnel drainage systems, given experience on some of the more recent Melbourne tunnel projects and to suggest larger diameter drains as a possible mitigating measure as advanced in the CIS (Appendix M, Table 14, p. 62, Risk No. GW016) should be reconsidered.

A very useful reference on this effect is given in the paper by Asche et al (2007)³ relating to the EastLink tunnels, although the principal rock formation traversed on that project was Anderson Creek Formation. However, the groundwater at EastLink is reasonably anticipated to be similar to that emanating from the Melbourne Formation to be encountered on East West Link.

³ Asche H R, Taylor E, Smith P, Campi P, & Callow I, "Tunneling for the Eastlink Project, Melbourne", RETC Proceedings Toronto 2007, pp. 534-550.



Potential for attack on concrete or clogging of tunnel drains is considered in terms of the Langelier Saturation Index (LSI). The LSI is based on the pH of the groundwater compared to the saturation pH. The LSI is temperature dependent and it is very important that the sampling is controlled so that samples taken are not an uncontrolled mix of groundwater from all levels of a borehole as well as drilling flushing water.

No explanation of the sampling techniques is given in the CIS or the reports provided with the LMA response to the Section 57(4) RFI.

Nevertheless it is an issue that needs careful attention in detail design:

- 1. To prevent ingress of potentially aggressive groundwater
- 2. To provide a suitable structural lining to withstand the groundwater if it is deleterious
- 3. To design a drainage system that is not susceptible to clogging caused by precipitation of scale derived from relatively insoluble calcium salts.

3.5 Contamination plume/s

The presence of a contaminated plume of groundwater in the vicinity of the former Fitzroy Gasworks site has been identified in various reports available to the AC (the CIS, the Technical Appendices, the reports provided as part of the Section 57(4) RFI and the EWS reviewed). The Performance Requirement GW5 (Table 17-2, Chapter 17 P. 23) lists "Contamination plume management, particularly associated with the former Fitzroy Gasworks" but the reports referenced in the CIS Technical Appendix M) by AECOM and SKM and provided to the AC by LMA in response to the Section 57(4) RFI are not consistent in their description of extent of the plume and direction of migration.

The presence of such a plume or plumes represents a key risk to TBM operations and subsequently the lining. In the first instance the contaminated material would be excavated by a machine if the plume intersects the alignment. After placing the lining, assuming pre-cast segments placed as part of the excavation cycle, the synthetic rubber seals (EPDM) between the segment circumferential and longitudinal faces of the segmental liner blocks may be subject to attack by hydrocarbon derivatives. EPDM exhibits satisfactory compatibility with fireproof hydraulic fluids, ketones, hot and cold water, and alkalis, and unsatisfactory compatibility with most oils, gasoline, kerosene, aromatic and aliphatic hydrocarbons, halogenated solvents and concentrated acids.

If a slurry TBM is utilised, the contaminated slurry represents a considerable problem in recycling the slurry after separating the tunnel spoil, which should be addressed prior to selection of a TBM and commencement of TBM operations. Use of an EPB TBM does not experience the same potential issue of contaminated slurry, but might experience contaminated spoil handling issues and the attendant risks of workplace safety, storage and transport and disposal.

The strategy of ascertaining the extent, and the direction of migration of the plume if it is mobile may not be resolved until project commitment occurs. This approach could have a serious adverse impact on the project programme (refer time scales and methods noted in the AECOM report pp. 6-8). Understanding and containing the plume by prior works is a typical approach on major tunnelling projects, but the CIS does not address this significant issue.

3.6 Mixed Face Tunnelling Conditions

The geological longitudinal section issued by LMA (Figure 3 Sheets 1 &2 of 2, Tunnel Longitudinal Section (East) Part2 illustrates the mixed face condition to be traversed on the indicated vertical alignment.

Three of the key issues concerning excavation and forming the tunnel will be:

- Relatively low cover
- Type of TBM to be selected, given the nature of varying conditions along the alignment



Large diameter tunnels in relatively close proximity.

The mixed face condition can be inferred to occur in nine distinct sections from Ch. 6200 (approx.) to Ch. 5100 (approx.). Whilst TBM selection is the contractor prerogative and responsibility, a high level of risk exists in coping with such conditions and is not mitigated by TBM choice alone.

Based on the inferred geological section, the mixed face condition interfaces proceeding eastwards are:

- Soil/siltstone
- Basalt/soil/siltstone
- Basalt/siltstone
- Soil/siltstone
- Basalt/siltstone
- Basalt/soil
- Basalt/siltstone
- Siltstone/soil
- Basalt/siltstone.

These changes in the face are challenging and should boulders of stronger rock part from the face of ground of differing strength and characteristics; they can cause severe difficulty and even damage to the TBM head. Intervention to effect repairs is extremely difficult due to the closed face necessary to control groundwater and can cause long delay to programme. Intervention can sometimes impact on the surface by the need for access shafts in extreme cases and a very recent example is the Seattle Alaskan Way project (November 2013 to present), currently the largest TBM ever manufactured, which has experienced a malfunction shortly after commissioning and completed about 300m of the 17.5m diameter tunnel.

The relatively low cover as shown on the inferred geological section, which is of the order of 1x to 1.5x the tunnel diameter, can present a problem if the passive restraint offered by the surrounding ground is low, such as towards the western portals, which allows the segmental structure to distort. No assessment of ground stiffness at the inferred tunnel horizon has been available to the AC, but it is an important matter for resolution in the design phase.

The tunnel horizontal alignment is only indicative within the Project Boundary. However, the tunnels are of large dimension (15m diameter each, corresponding to a typical Melbourne suburban house frontage (50 ft.)) and the separating pillar between the mainline traffic tunnels may be of similar dimension. Thus these large underground structures will be in relatively close proximity to surface property, because the tunnel footprint does not fit within the road reserve along part of the alignment or for reasons of road design requirements particularly at the eastern portal area.



4. EW Link (Eastern Section) Performance Requirements LMA Final Version

This commentary is confined to those Performance Requirements relating to tunnelling, hydrogeology and geomechanics in conformity with the Brief.

Noise and Vibration

The recommended Modified Performance Requirement as proposed by City of Yarra (NV8, NV9, NV10 and NV11) (refer p. 13 of EWS), and described in the Appendix C of the EWS by Dr Heilig, have not been adopted in the LMA Final Version of the Performance Requirements.

Whilst Dr Heilig stated:

"The document proposes vibration conditions in NV8 and NV9 which are consistent with those I have proposed in my technical report. The Yarra City Council recommends the additional wording "Implement remedial action as soon as possible if these target levels are exceeded" be applied to both sets of performance criteria.

Proposed Condition NV10 proposes that real time monitoring with regular reporting to the Council be implemented. This is consistent with the recommendations in my evidence.

Proposed Condition NV11 indicates the requirement for a condition assessment of utility assets prior to construction. The assessment should include specification of vibration limits. This is consistent with my recommendations in my evidence.

The new proposed condition NV14 requires a dilapidation survey prior to the commencement of the project on any buildings where relocation may be required or for those buildings within the CIS. My recommendation is that the conditions surveys should be completed and the extent of these surveys should be determined by the type of activity that may occur in the immediate area",

the LMA Final Version mirrors the earlier documentation on the respective Performance Requirements.

The only other matter is the correction necessary to the referenced Australian Standard AS2670.2, as discussed by Dr Heilig in Tabled Document 84 and noted on p. 18 of this Consolidated Advice.

Groundwater

The Performance Requirements GW1, GW 3 and GW 4 have been subject to update in the Final Version issued by LMA. The changes relate to the positions agreed by the Expert Conclave and the adoption of the EPA Publication 669 for groundwater sampling.

All changes are considered improvements to the Performance Requirements.



Appendices



Appendix A Letter of Instruction

PPV Letter of 26 February 2014 (not included)



PPV Letter of 26 February 2014 (not included)



PPV Letter of 26 February 2014 (not included)



Appendix B CV - A G Bennet



CV - AG Bennet (not included)