

ASSESSMENT REPORT

Section 75W Modification IPMG Warwick Farm Printing Facility – Rail Spur Line

1. BACKGROUND

The Warwick Farm printing facility is operated by Independent Print Media Group (IPMG), at Warwick Farm in the Liverpool City Council local government area (see Figure 1).



Figure 1: Site Location – Regional Context

IPMG is a leading Australian printing company with printing facilities located in Sydney, Melbourne and Brisbane.

The Warwick Farm facility was approved by the then Minister for Planning in March 2009, and included the refurbishment of an existing industrial building for the purposes of 24 hour print production, warehousing and distribution.

The Warwick Farm facility occupies a 7.9 hectare site, with a 350 metre western frontage to the Main South Passenger Railway Line (operated by RailCorp), the Sydney Metropolitan Freight Line and the Southern Sydney Freight Line (SSFL) which is currently being constructed. Approved daily train movements are shown in Table 1 below.

Table 1 – Approved daily train movements

Train Line	Daily Train Movements
SSFL (projected full capacity by 2018)	62
Illawarra Line	28
Sydney Metropolitan Freight Network	110

The SSFL is a major dedicated freight line that would run between Macarthur and Sefton in south-western Sydney.

The IPMG site has street frontage to Priddle Street and Scrivener Street, with access to the Hume Highway and Governor Macquarie Drive via Manning Street. Surrounding land uses include a range of large industrial operations, light industrial units, residences and horse stables associated with the nearby Warwick Farm Racecourse (approximately 800m to the north-east). There are around eight properties to the north of the site and to the east of the passenger and proposed freight lines (7-21 Manning Street), with the closest property some 10 metres from the boundary of the printing facility.

Other land uses in the locality include (see Figure 2):

- Car parking associated with Liverpool Hospital, approximately 50m to the south;
- Liverpool Hospital, located on the western side of the rail line approximately 350m to the south west;
- The Liverpool Sewage Treatment Plant (STP), approximately 400m to the east;
- The Georges River, approximately 450m to the east; and
- Warwick Farm railway station, approximately 3.5km to the north.



Figure 2: Locality Plan

The IPMG site currently has two parallel rail sidings running the length of the site on its western boundary with a 20 metre locomotive head shunt at the northern end. The existing sidings have been disconnected from the RailCorp network and disused for over 10 years. However, the strategic location of the site adjacent to the Main South Railway Line presents a unique opportunity to transport goods by rail in order to reduce road transport costs.

2. PROPOSED MODIFICATION

IPMG is seeking to modify its existing consent to construct a new rail spur line on RailCorp land connecting the SSFL (currently under construction) to the boundary of IPMG site.

The proposed rail track will enter the IPMG site at the north western corner and connect to the existing disused internal shunt line (see Figure 3). A motorised sliding gate with warning bell and lights is proposed at the rail entry to the IPMG site in order to prevent unauthorised access to the RailCorp corridor.

The proposal includes the removal of existing vegetation, earthworks and construction of a 10m wide corridor and associated rail track for a distance of approximately 150m.

IPMG intends to use the SSFL to transfer paper from Port Kembla to the Warwick Farm printing facility and finished product off-site. This is proposed to replace road transport of this material to the site.

Once operational, only one train would ingress and egress from the site per day (with a maximum of five in any given 7 day period).

The proposed spur line would be located within some 20 metres of the closest residence (21 Manning Street).

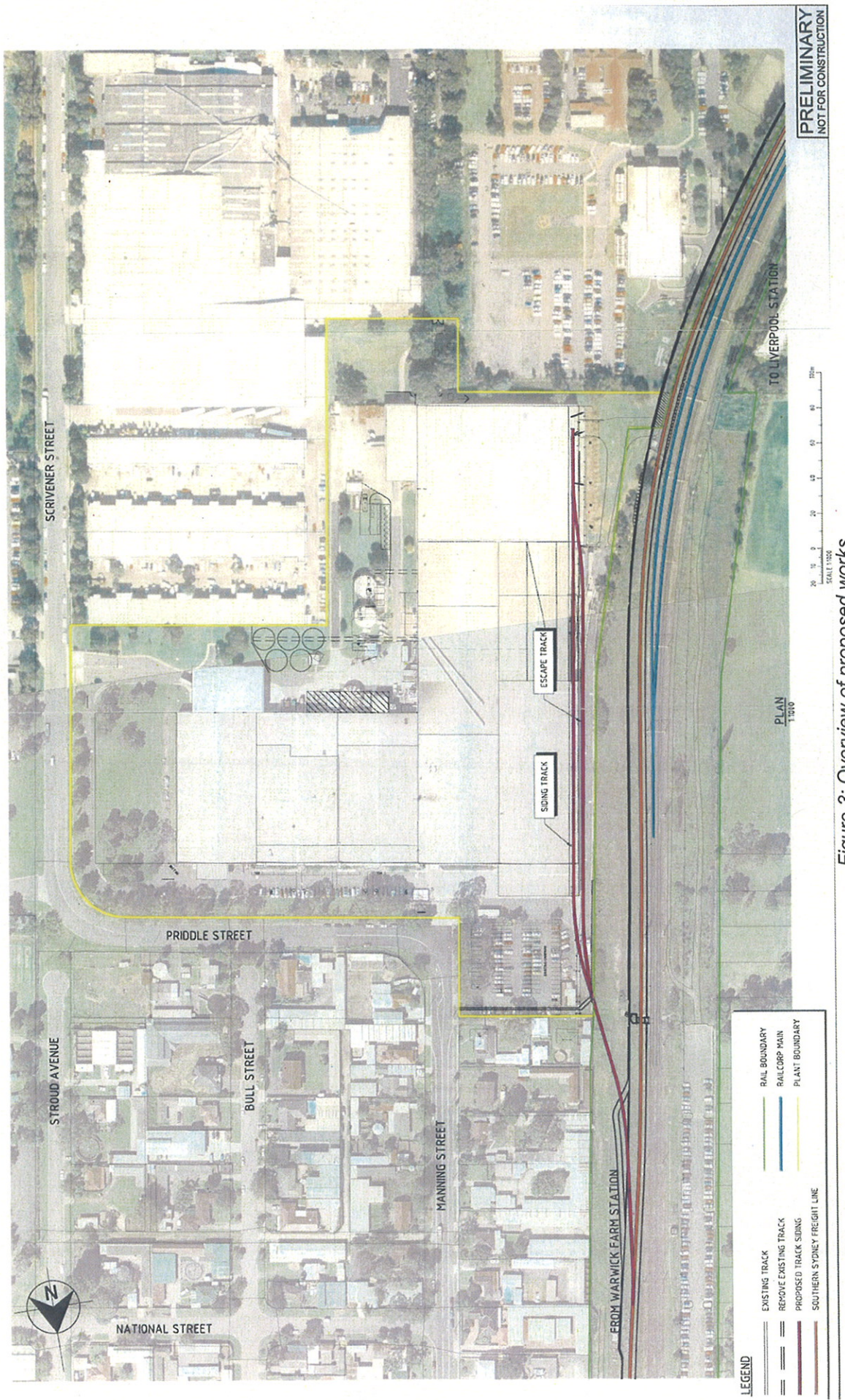


Figure 3: Overview of proposed works

3. STATUTORY CONTEXT

The Minister was the approval authority for the original project application and is consequently the approval authority for this application. However, on 25 January 2010, the Minister delegated his powers and functions as an approval authority to modify certain project approvals under section 75W of the EP&A Act to the Director. This modification application meets the terms of this delegation. Under these circumstances, the Director may determine the application under delegated authority.

The overall size and function of the printing facility would remain unchanged as a result of the proposal and any environmental impacts associated with the proposal are expected to be negligible. The Department has reviewed the extent of the proposed modification and considers that the scale of the development would not increase and environmental impacts would be adequately managed. Therefore, it is considered that the proposed modification is within the scope of section 75W of the EP&A Act.

Consequently, the Department considers that the application should be assessed and determined under Section 75W of the EP&A Act rather than requiring a new development or project application to be lodged.

4. CONSULTATION

Under Section 75W of the EP&A Act, the Department is not required to notify or exhibit the application. Following a review of the application, the Department sought comments from the Department of Environment, Climate Change and Water (DECCW), Liverpool City Council (Council), RailCorp and the Australian Rail Track Corporation (ARTC) as well as those landowners in the immediate vicinity of the proposed development (along Manning Street). Consultation with other government agencies and other neighbouring sites was considered unnecessary as the environmental impacts of the proposal would essentially remain unchanged.

The DECCW initially raised concerns with the noise assessment for the proposed modification, however, have subsequently provided recommended conditions of approval and has no objections to the proposal.

RailCorp raised no objections to the proposal and have recommended conditions of approval to ensure that the proposal would have minimal impact on existing RailCorp services and infrastructure.

ARTC outlined the need for IPMG to enter into a Works Deed with ARTC for the construction and connection agreement to the SSFL rail network. ARTC did not object to the proposal and provided subsequent recommended conditions of approval.

Council had no objections to the proposed development provided the Statement of Commitments outlined in the EA were adhered to.

The Department received 1 submission from a member of the general public concerned with the noise impacts of the proposed development and in particular the impacts on horses stabled on their property. The Department also received a number of phone calls from residences concerned with the operational impacts of noise and vibration from trains on private properties in the area.

5. CONSIDERATION

The Department has assessed the application on its merits and considers that the key issues to be noise and vibration.

5.1. Rail Noise and Vibration

The proposed modification has the potential to generate noise and vibration impacts during construction and operation, particularly for those residents located along Manning Street whose houses back directly onto the existing rail corridor.

The nearest potentially affected residence is located at 21 Manning Street, approximately 20 metres from the proposed development (see Figure 4).



Figure 4: Aerial view of closest sensitive receivers to proposed development

5.1.1. Construction

Noise

IPMG's noise assessment included noise modelling to predict the 'worst-case' construction noise levels at the nearest potentially affected receiver at 21 Manning Street.

The construction duration of the proposed modification is expected to be approximately 5 weeks, and would include noise generated by excavation, concrete breaking and track laying activities.

While noise monitoring identified that existing background noise levels are elevated [$\sim 53\text{dB(A)}$ – primarily due to the number of rail movements in the area], the assessment concludes that noise levels during 'worst-case' construction activities would exceed the relevant daytime construction noise objectives by 10-27 dBA at the closest property.

To manage construction noise impacts, IPMG propose to prepare and implement a Construction Noise and Vibration Management Plan. IPMG outline that the Plan would measures reduce noise generated, limiting noisier activities to certain hours and monitoring would be undertaken to ensure emissions do not exceed predicted noise levels.

The DECCW made no comments in relation to the predicted construction noise exceedances.

The Department acknowledges that construction noise from the proposal is likely to generate impacts. However, as the construction works are only anticipated to occur over a 5 week period, the Department considers that the impacts would only be for a short period of time, and as such would not be significant. Nevertheless, the Department has recommended specific conditions in order to minimise these impacts as much as possible (see Recommendations below).

Vibration

The highest vibration impact resulting from the proposed modification is likely to occur during excavation activities (ground vibration) with the use of a 14 tonne excavator and medium hydraulic hammer for breaking concrete.

The DECCW's *'Assessing vibration: a technical guideline'* recommends a safe working distance of 7 metres for cosmetic/structural damage and 23 metres for human response when operating a medium hydraulic hammer.

The nearest potentially affected structure is located 10 metres away, therefore construction works are not expected to exceed the relevant cosmetic/structural damage criteria. However, as the nearest potentially affected residence is located approximately 20 metres from the proposed development, the use of the medium hydraulic hammer does have the potential to marginally exceed the human comfort vibration criteria. The Construction Noise and Vibration Management Plan proposed by IPMG also aims to manage any vibration impacts.

The Department received a phone call from one member of the general public concerned with the impacts of vibration on the foundations and structural integrity of their property.

The Department notes the potential for a marginal exceedance in the human comfort vibration criteria, and has recommended specific conditions to manage any potential impacts.

Recommendation

The Department acknowledges the potential short-term construction noise and vibration impacts associated with the proposed modification.

In order to manage these impacts, the Department recommends that IPMG prepare and implement a site-specific Construction Noise and Vibration Management Plan (CNVMP) for the proposed development. The CNVMP would include requirements for IPMG to:

- notify residents of the nature and timing of scheduled works;
- use the quietest available plant equipment works in proximity to residents;
- use site hoardings and temporary noise barriers where feasible to shield noise intensive activities; and
- undertake noise and vibration monitoring to ensure noise and vibration levels do not significantly exceed modelling predictions.

Additionally, the Department has conditioned a commitment made by IPMG to also provide specific noise attenuation for the residents at 9 and 19 Manning Street (see Figure 4 above) prior to the commencement of construction, and to the satisfaction of the Director General. While primarily aimed at mitigating noise from train movements, the condition has been

worded so that the works would be done prior to construction and would therefore assist in minimising construction related noise impacts. This would include measures such as replacing roller doors with insulated material, filling cavities and voids at the stables at the rear of the properties with noise insulating material. While a further condition also requires IPMG to notify potentially affected residents and provide these residents with a contact number should they have any concerns.

The Department believes that with these measures in place and due to the expected noise attenuation afforded by existing horse stables with frontage onto the rail corridor on properties along Manning Street, construction noise impacts on residents would be reduced by up to 15 dBA.

In addition, the Department has also recommended a condition to manage any potential construction vibration impacting on the structural integrity of residential properties. The condition requires IPMG to prepare a dilapidation report for 19 and 21 Manning Street prior to the commencement of construction works and for any identified damages to be repaired by IPMG and to the satisfaction of the Director-General.

The Department is satisfied that the recommended conditions would manage construction impacts and ensure any vibration impacts are also mitigated.

5.1.2. Operation

The potential operational noise impacts of the proposed modification have been assessed according to both the DECCW's:

- 'Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects' (IGANRIP – to determine noise goals for IPMG trains operating on the public rail network); and
- 'Industrial Noise Policy' (INP - for operational noise limits once IPMG trains enter the IPMG site).

Off-Site Rail Noise

Under the IGANRIP Guideline, operational residential noise goals for the redevelopment of an existing rail line are 65 LA_{eq}(15hr), 60 LA_{eq}(9hr) and 85 LA_{max}. It is important to note that the IGANRIP guideline also permits increases of up to 3.0 dB above the LA_{max} criteria, without this being considered an exceedance.

In order to assess the operational noise emissions for the proposed modification, three noise modelling scenarios were considered:

- Scenario 1 – Existing Situation (RailCorp Passenger Trains only);
- Scenario 2 – Future Situation A (RailCorp Passenger and SSFL Trains);
- Scenario 3 – Future Situation B (RailCorp Passenger, SSFL Trains and IPMG Freight Trains);

IPMG's noise assessment predicted the expected 'worst-case' operational noise levels at the nearest potentially affected receiver (21 Manning Street). The results of this modelling are contained in Table 2 (below).

Table 2 – Operational Noise Emissions (IGANRIP)

Location	Scenario 1 - Existing			Scenario 2 (Future A)			Scenario 3 (Future B)		
	LA _{eq} (15hr)	LA _{eq} (9hr)	LA _{max}	LA _{eq} (15hr)	LA _{eq} (9hr)	LA _{max}	LA _{eq} (15hr)	LA _{eq} (9hr)	LA _{max}
Manning Street	56	53	78	60	59	86	60	59	86

The above predictions indicate that the proposed modification is not expected to result in an increase in noise levels from what is already approved with the operation of RailCorp's

Passenger Line and SSFL (currently being constructed). Furthermore, the modification is also expected to comply with the IGANRIP noise trigger levels.

The Department is therefore satisfied that operational noise impacts of IPMG trains in the existing public rail network on sensitive receivers would be negligible.

On-site Operational Noise

The existing project noise limit at the site for daytime operations at residential locations is 48 dBA.

IPMG's noise consultant utilised noise data for Class 81 locomotives (the same as that proposed for use on the IPMG rail siding) to predict the 'worst-case' scenario noise impacts associated with on-site operation of the proposed rail siding. This included things such as use of train breaks, a maximum locomotive speed of 5 kilometres per hour (kph) on site, engine idling and on-site locomotive re-coupling and shunting procedures.

Noise levels at the nearest potentially affected receiver were predicted at 63 dBA $LA_{eq}(15\text{ minute})$.

The above predictions indicate that noise levels resulting from on-site operations would not be expected to meet the project specific criteria in the consent.

However, the INP stipulates that where unusual or one-off events occur, modifying corrections may be applied to account for their infrequent occurrence. With this in mind, it is important to note that:

- only one train would be permitted to enter the IPMG site per day; and
- the total duration of rail siding associated activities that have the potential to generate noise are expected to be in the region of 3 to 5 minutes.

Taking this into consideration, it was deemed necessary to apply a modifying correction of 15 dBA to the acceptable daytime receiver noise level (as outlined in the INP for one-off events in any 24 hour period with a total duration from 1.5 to 6 minutes).

With the inclusion of the adjustment (or modifying) factor, the noise limit for the closest sensitive receiver to the proposed development was calculated at 63 dBA $LA_{eq}(15\text{ minute})$ therefore meeting the relevant INP noise goal (see Table 3).

Table 3 – Operational Noise Emissions - Daytime

Location	INP Noise Goal $LA_{eq}(15\text{min})$ dBA	Predicted Noise Level $LA_{eq}(15\text{min})$ dBA
21 Manning Street	63	63

The DECCW requested that the noise assessment include an assessment of high level short duration noise during locomotive re-coupling and shunting activities on residents. The response indicated that a maximum noise level of 84 dBA were predicted during locomotive shunting operations which would be expected to exceed the sleep disturbance criteria of 52 dBA $L_{A1}(1\text{ minute})$ in the consent.

The Department notes this noise issue. However, as the proposal would only be undertaking these activities on 1 occasion during the day and 1 occasion during the evening, this noise level would not occur during the night when the sleep disturbance criteria apply. In addition, the Department notes that the existing maximum noise levels currently measured in the vicinity of the passenger line and SSFL are 84 dBA, which would be more frequent than the activities associated with the IPMG proposal.

The Department received one submission from a member of the general public who was concerned with the operational noise impacts of the proposed development and in particular the impacts on horses stabled on their property.

The Department is satisfied that the operational noise emissions associated with the proposed modification would comply with the relevant INP noise limits and will not result in any adverse noise impacts on residents or horses along Manning Street.

Vibration

Operational railway vibration resulting from the proposed modification has the potential to damage the structural integrity of buildings in the vicinity of the proposed development and negatively impact upon the human comfort of the occupants and/or users of these buildings. An operational vibration assessment was undertaken and on the basis of the proposed track alignments, number of train passbys and maximum train speeds on each line, the Vibration Dose Values (VDV) was calculated at the nearest sensitive receiver at 21 Manning Street (see Table 4 below).

Table 4 –Operational Vibration Calculations

Location	'Preferred' Residential VDV Criteria (m/s ^{1.75})		Calculated Residential VDV (m/s ^{1.75})	
	Day	Night	Day	Night
21 Manning Street	0.2	0.13	0.12	0.10

The above predictions indicate that the calculated VDV are expected to comply with the 'preferred' daytime and night-time criteria. Based on the assumption that neighbouring buildings have been built in accordance with the Building Code of Australia, and given that only 1 train would be permitted to access the site per day and a maximum locomotive speed on the of 5 kilometres per hour on the siding, it is unlikely that the foundations or structural integrity of these properties would be affected by the minor level of ground vibration generated by IPMG rail associated activities.

The Department is therefore satisfied that operational vibration impacts resulting from the proposed development would be negligible.

Recommendation

The Department acknowledges the potential operational noise and vibration impacts associated with the proposed modification.

Notwithstanding this, the Department is satisfied that the proposed modification would comply with the IGANRIP noise trigger levels, INP noise limits and would therefore not result in any adverse noise impacts on residents along Manning Street.

Importantly, the Department also acknowledges that the proposal would also reduce the number of B-doubles on Manning Street by 6 per day and 42 per week, which would provide some positive reduction in truck noise on this local road.

However, the Department has recommended a number of conditions to ensure any operational noise or vibration impacts are adequately managed. This includes:

- limiting the number of trains to 1 in and 1 out per day;
- restricting the operation of the rail spur to 7:00am to 6:00pm, thereby reducing impacts on both residents and horses;
- implementing noise attenuation measures to certain residential properties;
- providing dilapidation reporting assurance for certain residential properties;
- a noise compliance validation assessment to ensure the proposal is compliant with the noise limits; and

- a Rail Traffic Management Plan, which would include a locomotive driver code of conduct, to assist in minimising rail traffic noise impacts e.g. maximum on site locomotive speed of 5 kph and procedures to ensure trains do not queue (or idle) on the public rail network.

The Department is satisfied that with these recommended conditions, operational noise and vibration impacts would be managed.

5.2. Other

Other issues identified during the assessment process and the Department's consideration of the issues are summarised in Table 5 below.

Table 5 - Summary of other impacts

Issue	Consideration	Recommended conditions of approval
Infrastructure	• The proposal has the potential to impact upon nearby existing rail infrastructure. • RailCorp expressed concerns about the potential impacts on the geotechnical and structural stability of RailCorp's facilities. • IPMG agreed to provide a geotechnical report demonstrating that the proposed development would not impact on RailCorp's infrastructure. • The Department is therefore satisfied that the proposal would not adversely impact any rail infrastructure in the vicinity of the proposed development.	• Recommended conditions require IPMG to: ◦ prepare and implement a Rail Traffic Management Plan; and ◦ undertake a geotechnical report on the potential effects of the proposal on the geotechnical and structural integrity of RailCorp infrastructure.
Soil and Water	• Removal of existing vegetation, earthworks and construction associated with the proposed modification could generate erosion & sedimentation and affect stormwater flows. • IPMG propose to utilise sediment fences and other controls to manage potential impacts. • RailCorp requested assurance that no stormwater would be discharged onto the rail corridor as a result of the proposed modification. • However as the IPMG site is lower than RailCorp's land stormwater runoff is expected to drain into the rail corridor. • The Department is therefore satisfied that soil and water can be appropriately managed on site.	• Recommended condition requires IPMG to: ◦ Ensure no stormwater is discharged onto the existing rail corridor unless prior approval has been obtained from RailCorp.
Traffic (including Rail Traffic)	• The proposal would contribute 2 movements per day to the SSFL, the Illawarra line and the Sydney Metropolitan Freight Network. • The proposal would constitute approximately 1% of all train movements on the above rail networks once the SSFL is fully operational by 2018. • The proposal would reduce B-double truck movements by 6 per day (42 per week), providing a positive affect on local residential streets. • The Department is therefore satisfied that the existing rail network has sufficient capacity and reduced B-double movements would improve road safety residents and horse trainers.	• Recommended condition requires IPMG to: ◦ Restrict train movements to 1 to ingress and egress the site per day and that the maximum number of trains that access the Site does not exceed 5 trains in any given 7 day period.
Flora and Fauna	• The proposed modification involves removal of exotic vegetation and has the potential to impact upon native vegetation in the vicinity of the proposed development. • The assessment found the vegetation to be highly disturbed and dominated by exotic plant species. • The vegetation removed as part of the proposed works would be limited to exotic vegetation and is not considered to represent significant habitat for any fauna species. • All native vegetation within the vicinity of the proposed	• N/A

Issue	Consideration	Recommended conditions of approval
	development would be fenced and retained as part of the proposed modification. • The DECCW recommended that any re-planting should use native species of local province. • IPMG have agreed to use native plant species when re-planting. • The Department is satisfied that the proposed modification would not significantly impact upon flora and fauna.	
Visual Impact	• The proposed modification has the potential to have a negative impact on the visual amenity of residences in the vicinity of the proposed development. • Proposed works outside of IPMG land involve laying of rail tracks at ground level within an existing rail corridor. • The proposed modification does not include changes to any building structures on site. • A sliding gate and warning system (including bells and lights) is proposed at the rail entry to the IPMG site which has potential to distract train drivers using the RailCorp corridor. • RailCorp requested that IPMG install lights, signs and reflective materials that limit glare and reflectivity to their satisfaction. The Department has incorporated RailCorp's request into the recommended conditions of consent. • The Department is therefore satisfied that the proposed development will not have any adverse impacts on visual amenity.	• Recommended condition requires IPMG to: ◦ ensure any lights, signs or reflective materials installed limit glare and reflectivity on the rail corridor to the satisfaction of RailCorp.

6. CONCLUSION

The Department has assessed the merits of the project in accordance with the requirements in Clause 8B of the EP&A Regulation. This assessment has found that the proposed modification is unlikely to cause any significant impacts and potential impacts can be appropriately managed through the mitigation measures proposed by IPMG and the modified conditions of approval.

The proposed modification would:

- allow IPMG to satisfy its obligations under the Statement of Commitments for the original Project Approval;
- improve the operational and environmental efficiency of the approved development; and
- remove trucks from local streets improving safety for trainers and their horses associated with the nearby Warwick Farm racecourse.

Consequently, the Department considers the proposed modification should be approved subject to conditions.

7. RECOMMENDATION

It is **RECOMMENDED** that the Director:

- consider the findings and recommendations of this report;
- determine that the proposed modification is within the scope of section 75W of the EP&A Act;
- approve the proposed modification under section 75W of the EP&A Act; and
- sign the attached notice of modification.

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Chris Ritchie
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1/6/10



1/6/10

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