

ASSESSMENT REPORT

Section 75W Modification IPMG Warwick Farm Printing Facility – HSWO Printing Presses

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.

On 24 March 2009, the IPMG printing facility at Warwick Farm was approved by the then Minister for Planning, and included the refurbishment of an existing industrial building for the

purposes of 24 hour rotogravure print production, warehousing and distribution of media including magazines, newspapers and catalogues (see Figure 2).

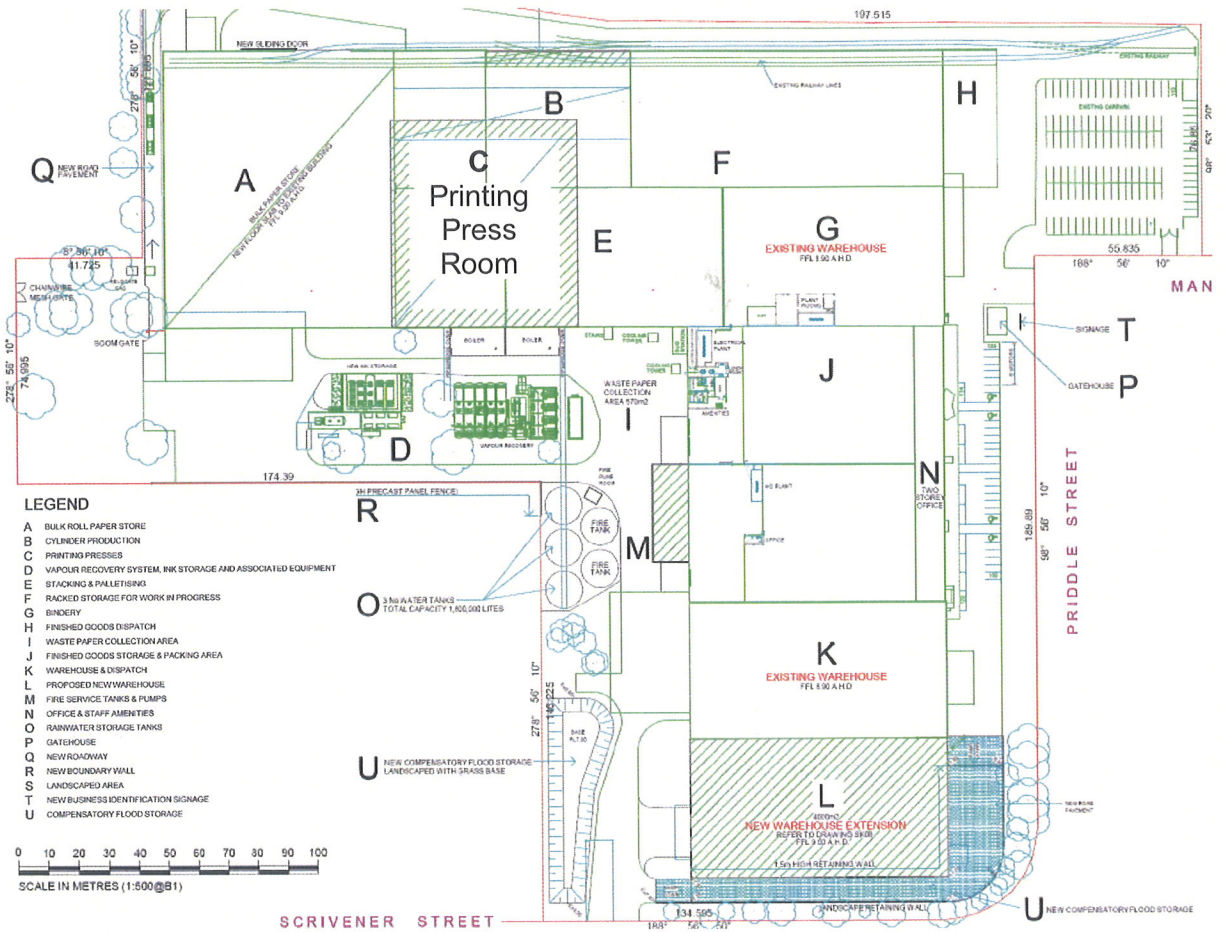


Figure 2: Approved Project Layout Plan

In particular, the approval included the installation of 3 rotogravure printing presses in the print room. Rotogravure printing is commonly used in Europe and USA, but has never been implemented in Australia. This process allows for significant savings on printing times, the use of lighter paper without loss of print quality, reduction in greenhouse gas emissions and significant reduction in paper waste, amongst other benefits.

At present, the approved refurbishment of the existing industrial building on-site has not commenced and no new printing presses have been installed.

In June 2010, the Minister also approved a modification for the construction and operation of a new rail spur line connecting the IPMG site to the adjacent Southern Sydney Freight Line (SSFL) to allow IPMG to transfer paper from Port Kembla to the Warwick Farm printing facility and finished product off-site.

The IPMG site is surrounded by a range of land uses including large industrial operations, light industrial units, residences on nearby Manning Street and horse stables associated with the nearby Warwick Farm Racecourse (approximately 800m to the north-east – see Figure 3).

Other key land uses in the vicinity of the site include (see Figure 3):

- 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 3: Locality Plan

Due to an economic downturn in the printing industry, IPMG does not propose to proceed with the installation of the rotogravure printers at the facility in the immediate to medium-term future. While rotogravure printers do offer the abovementioned print quality and efficiency benefits, they are also much more expensive than regular printing presses.

The site will still be redeveloped (as approved), however, in the interim, IPMG now intends to use the facility for standard Heat Set Web Offset (HSWO) printing until such time as the financial state of the printing industry improves. This is partly because HSWO printing and equipment is generally much cheaper in terms of upfront and on-going costs.

In order to allow HSWO printing to occur at the facility, a number of internal and external changes would be required to the layout and physical structures of the approved buildings on-site.

2. PROPOSED MODIFICATION

IPMG is seeking to modify its existing consent to allow HSWO printing to be undertaken at the Warwick Farm Facility. In particular, the proposed modification includes the following changes to the facility (see Figures 4&5 below):

Internal

- the installation of 6 HSWO printing presses in the approved printing press room to temporarily replace 3 rotogravure printing presses already approved under the existing consent;
- the addition of 2 sheet fed printing presses in an area previously approved as office space; and
- minor internal reconfigurations to accommodate the new printing presses.

External

- lowering the roof height of the printing press room by 1.5 m (from 14m to 12.5m);
- the installation of 8 new flues on the roof of the main warehouse building to discharge exhaust gases from the HSWO printing press dryers ranging from 460mm x 820mm in diameter, the tallest of which would be 14.9 m in height (see Figure 5);
- relocation of the waste paper collection area (15.5 m to the west); and
- the installation of 3 new water tanks (1 for fire fighting purposes) and a rainwater capture system to serve additional water needed for the HSWO process.

Minor administrative

- amending the Lot and DP number on the project approval to reflect updated land title information following minor boundary adjustments to the site.

Ultimately, IPMG is seeking approval to operate under 2 additional scenarios relative to the approved operation (i.e. the status quo).

The approved and modified operating scenarios include:

- **Approved Operation** - installation and operation of 3 rotogravure printing presses.

Modified Operation

- **Print Scenario 1** - installation and operation of 6 HSWO printing presses; and
- **Print Scenario 2** - installation and operation of 1 rotogravure and 4 HSWO printing presses.

While IPMG still intend to redevelop and operate the site as approved, in the interim, IPMG intends to operate under Print Scenarios 1 or 2. The operation of the modified facility is only proposed as an interim solution until such time as it is financially feasible to install all 3 rotogravure printing presses at the site, as per the approved project.

The modified building and site layout would only apply under Print Scenario 1. These changes are predominantly internal and are consistent with the approved project.

Under Print Scenario 2, the configuration of the site would be in accordance with the approved project layout, with the exception of four of the new flues which would remain in situ with the 18-metre stacks and associated vapor recovery system, as per the approved project.

The proposed modification would allow IPMG to have a flexible approval which allows both HSWO and rotogravure printing (or a combination of) to be undertaken at the site, depending on print industry conditions and market demand.

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 then 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-General. This modification application meets the terms of this delegation. Under these circumstances, the Director-General 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.

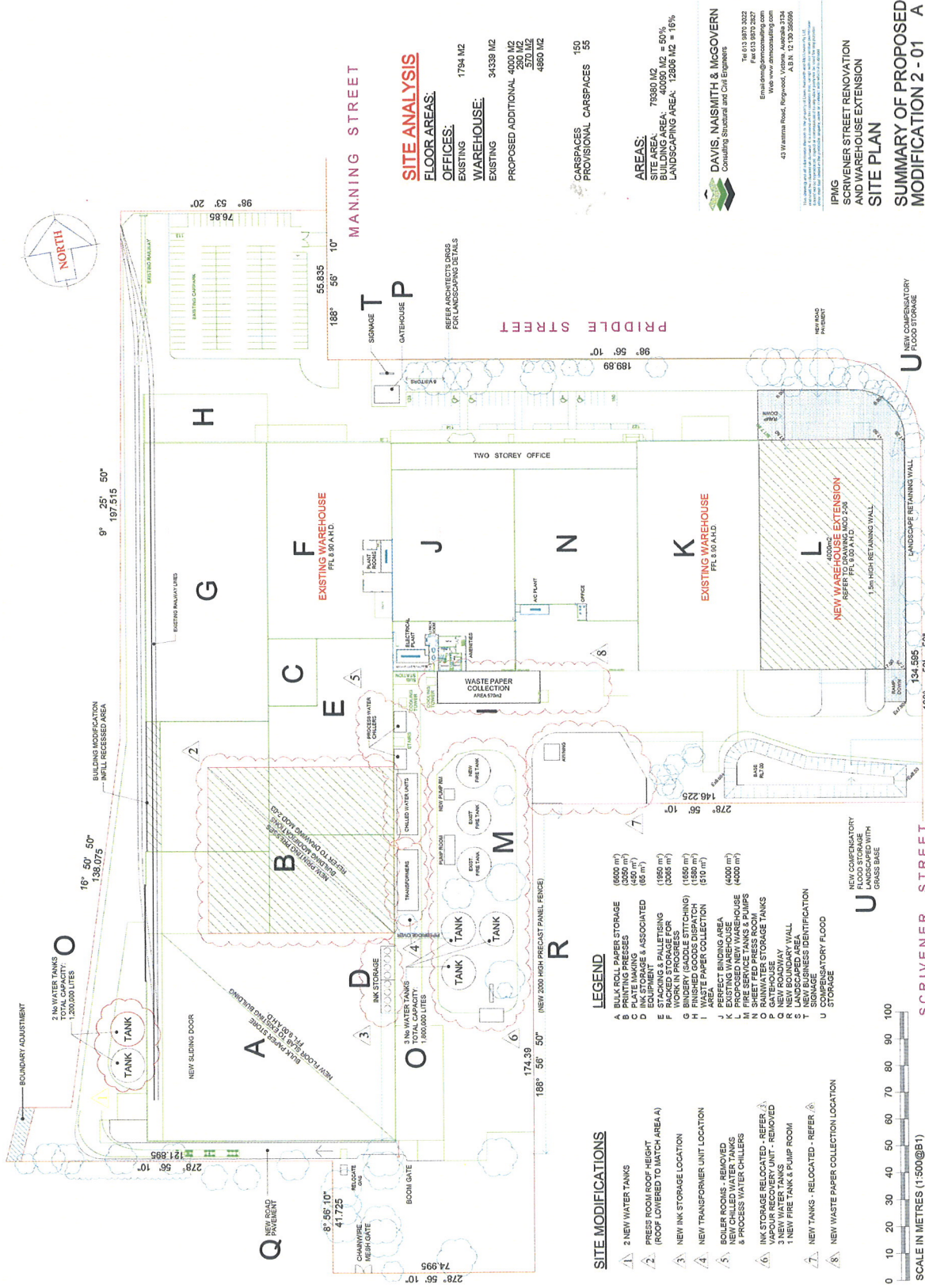
Consequently, the Department considers that the application should be assessed and determined under Section 75W of the EP&A Act rather than requiring a new development or project application to be lodged.

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 Office of Environment and Heritage (OEH, formerly Department of Environment, Climate Change and Water or DECCW) and Liverpool City Council (Council). Consultation with other government agencies and other neighbouring sites was considered unnecessary as the environmental impacts of the proposal would essentially remain unchanged.

The OEH did not object to the proposal or raise any issues of concern.

Council did not object to the proposal or raise any issues of concern.



SITE ANALYSIS

FLOOR AREAS:
 OFFICES: 1794 M2
 EXISTING
 WAREHOUSE: 34338 M2
 EXISTING
 PROPOSED ADDITIONAL: 4000 M2
 200 M2
 570 M2
 4860 M2

CARSPACES: 150
 PROVISIONAL CARSPACES: 55

AREAS:
 76380 M2
 BUILDING AREA - 40000 M2 @ 50%
 LANDSCAPING AREA - 12380 M2 @ 10%

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IPMG
 SCRIVENER STREET RENOVATION
 AND WAREHOUSE EXTENSION
SITE PLAN

**SUMMARY OF PROPOSED
 MODIFICATION 2 - 01 A**

LEGEND

- A BULK ROLL PAPER STORAGE (6600 m³)
- B PRINTING PRESS (4400 m³)
- C INK STORAGE & ASSOCIATED (85 m³)
- D EQUIPMENT (1980 m³)
- E RACKED STORAGE FOR (3065 m³)
- F WORK IN PROGRESS (1850 m³)
- G FINISHED GOODS DISPATCH (1580 m³)
- H WASTE PAPER COLLECTION (510 m³)
- I PERFECT BINDING AREA (4000 m³)
- J EXISTING WAREHOUSE (4000 m³)
- K FIRE SERVICE TANKS & PUMPS
- L SHEET FED PRESS ROOM
- M GATEHOUSE STORAGE TANKS
- N NEW ROADWAY
- O NEW BUSINESS IDENTIFICATION
- P LANDSCAPED AREA
- Q NEW TANKS - RELOCATED - REFER (6)
- R NEW WASTE PAPER COLLECTION LOCATION
- S U

SITE MODIFICATIONS

- 1. 2 NEW WATER TANKS
- 2. PRESS ROOM ROOF HEIGHT (ROOF LOWERED TO MATCH AREA A)
- 3. NEW INK STORAGE LOCATION
- 4. NEW TRANSFORMER UNIT LOCATION
- 5. BOLLER ROOMS - REMOVED & PROCESS WATER CHILLERS
- 6. INK STORAGE RELOCATED - REFER (6)
- 7. VARIOUS RECOVERY UNIT - REMOVED
- 8. 3 NEW WATER TANKS
- 9. 1 NEW FIRE TANK & PUMP ROOM
- 10. NEW TANKS - RELOCATED - REFER (6)
- 11. NEW WASTE PAPER COLLECTION LOCATION

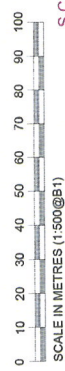


Figure 4: Summary of Proposed Modifications

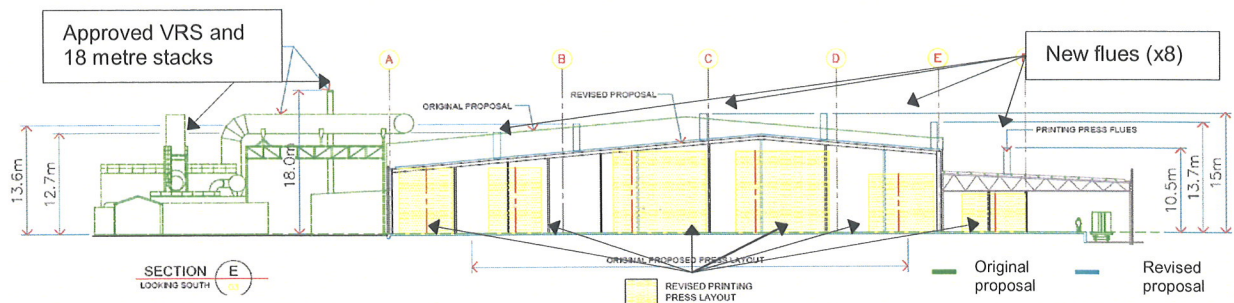


Figure 5: Proposed HSWO exhaust flues relative to approved vapour recovery system (VRS) and 18 metre stacks

5. CONSIDERATION

The Department has assessed the application on its merits and considers the key environmental issue to be air quality. Consideration of all other issues is summarised in Table 3 below.

5.1 Air Quality

Air impurities which are commonly generated in the rotogravure printing process (as approved) include acid gases (sulphuric acid and chromium), toluene, oxides of nitrogen, carbon monoxide, carbon dioxide, sulphur dioxide and dust particles.

As part of the approved project, IPMG undertook an air assessment in accordance with the DECCW's (now OEH's) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* which sets out the design ground level concentration limits for nearby sensitive receivers.

The air emission concentration limits under Condition 16 of the existing project approval (MP 08_0088) for the printing facility are listed in Table 1 below.

Table 1 – Approved emissions concentration limits

Chemical	Maximum Discharge Concentration Limits (mg/m ³)
Sulphuric acid mist, sulphur trioxide (SO ₃) or both, as SO ₃ equivalent	60
Chromium	1
VOCs (including toluene) (expressed as n-propane)	35
Nitrogen dioxide or Nitric oxide (NO) or both, as NO ₂ equivalent	100
Solid particles (Total)	20

Note: Air emissions from the project are to be measured in accordance with *The Protection of the Environment Operations (Clean Air) Regulation 2002*.

No change is sought to the air emission concentration limits of the existing project approval.

HSWO printing, as would be utilised under both Print Scenarios 1 & 2 of the proposed modification, does not emit the same pollutants as rotogravure printing. Table 2 below provides a brief comparison of the emissions associated with each type of printing.

Table 2 - Summary of emissions by printing type

Emission	Rotogravure Printing	HSWO Printing
Volatile Organic Compounds (VOCs)	√	√
Carbon Monoxide (CO)	√	√
Carbon Dioxide (CO ₂)	√	√
Nitrogen Oxides (NO ^x)	√	√

Oxygen (O)	√	√
Chromium	√	
Sulphuric Acid/Trioxide	√	
Sulphur Dioxide	√	
Total Solid Particles	√	

At present, air emissions from the approved project would be managed by:

- a vapour recovery system (VRS), including:
 - a control room, ducting pit and fan;
 - a filter room;
 - 5 cylinders for gas collection and associated longitudinal duct used to discharge emissions from a stack 15 metres from the ground level; and
- two natural gas boilers for printing process drying, including:
 - a flue gas analyser to optimise combustion and reduce boiler emissions;
 - two boiler stacks 18 metres in height used to discharge emissions generated by the boilers.

Under Print Scenario 1, the approved boilers, 18 metre stacks, VRS and associated ducting would not be installed. This is because rotogravure printer emissions associated with the approved VRS (e.g. from toluene) would not occur with HSWO printing.

Under Print Scenario 2, the approved boilers, stacks, VRS and associated ducting would be installed as per the approved project and remain in situ with 4 of the flues installed as part of the proposed modification.

IPMG engaged a consultant to undertake a comprehensive air quality impact assessment to predict air emissions associated with the proposed modification. Table 3 below illustrates the predicted air emissions under Print Scenarios 1&2 of the proposed modification relative to the air emission concentration limits listed in the existing project approval (MP 08_0088) and the POEO Regulations.

Table 3 – Predicted Emission Concentrations

Emission	Unit	Print Scenario 1	Print Scenario 2	Approved Printing (Status Quo)	Project Approval Limits	Group 6 POEO Regulation limits
VOCs (as n-propane)	mg/m ³	0.09 - 0.19	35	35	35	40
CO	mg/m ³	240 - 450	450	NS	NS	*Not relevant if VOC limit applies
CO ₂	%	1.8 - 2.0	8 - 10	NS	NS	Not regulated
NO ^x	mg/m ³	72 -100	100	100	100	350
O	%	17.4 – 17.9	18	NS	NS	Not regulated
Chromium	mg/m ³	N/A	1	1	1	1
Sulphuric Acid/Trioxide	mg/m ³	N/A	60	60	60	100
Sulphur Dioxide	mg/m ³	<5	<5	NS	NS	Not regulated

Note: NS: not specified (combustion not part of approved project), N/A: not applicable and POEO Regulation: Protection of the Environment Operations (Clean Air) Regulation 2010; and
 * OEHL advice indicates CO Limit is not relevant from a regulatory perspective and VOC Limits generally are applied instead of CO and its more accurate and more applicable to printing industries.

The predicted emission concentrations listed in Table 3 above indicate that the modified facility is expected to comply with the air emission concentration limits listed in Condition 16 of the existing project approval.

The use of the latest HSWO dryer technology including integrated thermal oxidisers, afterburners and associated heat recovery to optimise energy combustion would not increase any of the VOCs, CO² or NO_x emission levels relative to the approved project. Accordingly, there would be no need to vary the air emission concentration limits listed in Condition 16 of the existing project approval.

In addition, the predicted emissions in Table 3 (above) indicate that the modified facility is also expected to comply with the Group 6 air emission limits of the *Protection of the Environment Operations (Clean Air) Regulation 2010* (POEO Regulation).

As the facility would not be a scheduled/licensed activity under the *Protection of the Environment Operations Act 1997* (POEO Act), Council is the appropriate regulatory authority for environmental matters (including air) under the POEO Act.

Both the OEH and Council did not raise any concerns regarding the predicted air emission concentrations of the modified facility.

Under the project approval for the site, there are existing conditions which aim to monitor and manage air emissions from the facility. These include:

- the requirement for IPMG to prepare and implement an Air Emissions Validation Program for the site demonstrating compliance with the approved air emission concentration limits.

The Department considers that this type of emission validation would also be necessary following the commencement of operations associated with the proposed modification (for both Print Scenarios 1&2). This would ensure compliance with the air emission concentration limits predicted in the modified EA against the existing project approval and POEO Regulation limits.

The Department has incorporated this requirement into the recommended conditions of approval.

No odours would be generated by HSWO printing as the print dryers are designed to destroy odorous VOCs.

The Department is therefore satisfied that air quality impacts from the modified facility can be adequately managed through recommended conditions of approval and would not increase relative to the approved project.

5.2 Other Issues

Table 4 - Summary of other impacts

Issue	Consideration	Recommended conditions of approval
Visual Impact	<ul style="list-style-type: none"> • The proposed modification requires 8 new flues for HSWO gas emission to be installed on the roof of the print press room, minor alterations to the print press room roof and other minor external changes. • The flues would be up to 820mm in diameter, the tallest of which would be 14.9 m in height from ground level, approximately 2.4 metres above the highest part of the roof and 3.1 metres lower than the approved 18 metre boiler stacks. • Under Print Scenario 1, the 8 flues are an interim measure instead of, and not additional to the approved stacks. • Under Scenario 2, 4 flues would remain in situ with the stacks for vapor recovery as per the approved project. • The proposed modification would also require the roof of the print press room to be lowered 1.5m from 14 to 12.5m in the interim operation period. • The height of the modified press room roof would be lower than the approved roofline, would comply with the height limits of Council's LEP and along with the flues are not likely to be visible from key viewing points 	<ul style="list-style-type: none"> ○ Recommended Condition that would require IPMG to operate the facility in accordance with: <ul style="list-style-type: none"> - the original approval and associated plans; - the modified project MP_08_0088 MOD 2 Scenario 1 and associated plans; or - the modified project MP 08_0088 MOD 2 Scenario 2 and original plans (excluding the 4 flues to remain in situ with the approved stacks and VRS).

Issue	Consideration	Recommended conditions of approval
	<p>such as residences along Priddle and Manning Streets.</p> <ul style="list-style-type: none"> • The majority of the existing building is screened from the nearest residential receivers along Priddle Street by well-established landscaping, mature trees and fencing. The modified building would be similarly screened. • Finally, the modification represents minor changes (predominantly internal) to an existing manufacturing facility in an established industrial area. • The Department is therefore satisfied that visual impacts would be negligible. 	
Water usage	<ul style="list-style-type: none"> • The use of HSWO printing presses would increase water consumption at the facility by approximately 50% (from 6.32 to 9.47 mega litres per annum). • The rainwater capture system would be modified in two ways to accommodate the modified facilities water requirements. This includes: <ol style="list-style-type: none"> 1. increasing the roof area used to capture rain water by 2.511m² from 8,862m² to 11,373m² (a 27% increase); and 2. installing 2 additional 600,000 litre rain water storage tanks. • The approved project utilized a rainfall catchment area of sufficient size that under average rainfall conditions provided an over supply of non-potable water. • The modified facility would continue this trend by providing a 27.5% oversupply of non-potable water as a result the rainwater capture system modifications. • Accordingly, the facility would not increase its consumption of potable water. • The Department is therefore satisfied water use can be appropriately managed on-site and impacts would be negligible. 	<ul style="list-style-type: none"> ○ N/A
Hazards and Risk	<ul style="list-style-type: none"> • HSWO printing would reduce the quantity of dangerous goods, particularly toluene, stored and/or used on-site. • Toluene (methylbenzene) is a hazardous chemical and is the main risk contributor to the IPMG site. • Toluene is not used in the HSWO printing process. • HSWO ink is also less hazardous in its chemical properties than other inks. • The Department's Hazards Unit has reviewed the proposed modification and considers that the risk profile of the modified facility would be lower than the approved project. • The Department is therefore satisfied that the proposed modification would not increase hazards and risk. 	<ul style="list-style-type: none"> ○ N/A
Traffic	<ul style="list-style-type: none"> • Under Scenario 1, the proposed modification would result in a 25% interim reduction in truck movements per day, due to a reduction in throughput associated with HSWO printing.. • Under Scenario 2, throughput would also be reduced and result in a subsequent reduction in truck movements, relative to the approved project. • The Department is therefore satisfied that the proposed modification would temporarily reduce traffic. 	<ul style="list-style-type: none"> ○ N/A
Noise	<ul style="list-style-type: none"> • The proposed modification would not increase the noise impacts of the approved project. • In the interim, noise impacts of the modified facility are expected to be less than the approved project because of a reduced throughput, a reduction in truck movements and associated traffic noise (as above). • The Department is therefore satisfied noise impacts would be negligible. 	<ul style="list-style-type: none"> ○ N/A

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 environmental impacts and is consistent with the approved project.

The proposed modification would:


- have minimal additional environmental impacts associated with the original project application;
- give IPMG an approval which is responsive to changes in printing market conditions;
- reduce hazards and risk at the site in the interim; and
- remove trucks from local streets in the interim.

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

7. RECOMMENDATION

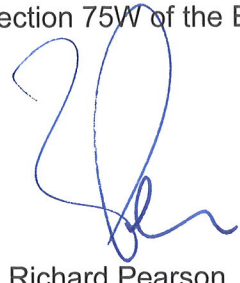
It is RECOMMENDED that the Director-General:

- 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.



9.5.11


Chris Wilson
Executive Director



13/5/11

Richard Pearson
Deputy Director-General

Andrew Hartcher
Environmental Planning Officer



14/5/2011

Sam Haddad
Director-General