

# ***Summary File ONLY***

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**IT IS BROWSABLE ON-SCREEN ONLY AND IS PROVIDED  
FOR YOUR INFORMATION TO DECIDE WHETHER TO  
BECOME A PROSPECTIVE TENDERER ONLY**

Note: This file may contain a brief scope statement, or an extract from the RFT documents, or a full exhibited copy – depending on the specific circumstances.

To participate in this tender process you **MUST** first download or order a full copy of the Request for Tender (RFT) documents, including the responsible components, and any addenda issued to date.

To do this return to the RFT web page on this web site and copy the RFT documents to your own computer or network – the blue “**DOWNLOAD A SOFT COPY**” link at the bottom provides access to the page from which you can do this.

**Tender Document**  
**for**  
**Lighting Upgrade to Four High Schools – Illawarra Region:**  
**Figtree High School**  
**Nowra High School**  
**Vincentia High School**  
**Warilla High School**

**Contract No: 0801772**

**September 2008**

**Department of Commerce**  
**for**  
**Department of Education and Training**

This Specification has been produced using NATSPEC

by: NSW Department of Commerce

Subscriber Number: 94081284

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# TENDERING

# CONDITIONS OF TENDERING

[THERE ARE 10 PAGES IN THIS SECTION](#)

This section includes notices to tenderers.

The Conditions of Tendering section does not form part of the Contract.

## 1 GENERAL

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### 1.1 CONTACT PERSON

Refer requests for information about the Tender to:

Name: Roy Craddock

Telephone number: (02) 9372 8213

Facsimile number: (02) 9372 8222

E-mail address: roy.craddock@commerce.nsw.gov.au

### 1.2 NSW GOVERNMENT CODE OF PRACTICE FOR PROCUREMENT

Tenderers must comply with the NSW Government *Code of Practice for Procurement*, which is available on the Internet at:

[www.treasury.nsw.gov.au/procurement/cfpig](http://www.treasury.nsw.gov.au/procurement/cfpig)

Lodgement of a tender is evidence of the Tenderer's agreement to comply with the Code for the duration of any contract awarded as a result of the tender process. If a tenderer fails to comply with the Code, the Principal may take the failure into account when considering this or any subsequent tender from the tenderer, and may pass over such the tender.

## 2 TENDERER ELIGIBILITY

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### 2.1 ACCEPTABLE LEGAL ENTITIES

The Principal contracts only with recognised and acceptable legal entities. The Principal does not contract with firms under any form of external administration. Any tender submitted by an unincorporated business such as a sole trader, partnership, or business name must identify the legal entity that proposes to enter the contract.

If the Tenderer is a trustee, the Principal may require:

- an unconditional undertaking in accordance with Preliminaries Clause - **Additional security and obligations for trustees**; and
- a signed statement from the Tenderer, provided before the Contract is awarded, making the following undertaking:

'If (insert the legal name of the Tenderer) is awarded Contract No (insert the contract number) for (insert the contract description) it will provide security in the amount of (insert the amount of security advised by the Principal) in accordance with Preliminaries clause - **Additional security and obligations for trustees**, and it undertakes to ensure that, for the duration of the Contract, the total value of the trust beneficiaries' loans to the trustee is always greater than the total value of trust beneficiaries' loans from the trustee.'

Failure to provide the signed statement may result in the Tender being passed over.

## 2.2 QUALITY MANAGEMENT

The Principal may elect to pass over a tender from a tenderer that does not demonstrate the capacity to systematically plan and manage the quality of its work in accordance with the NSW Government *Quality Management Systems Guidelines*, which are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

Submit with the Tender the information identified in Tender Schedules - **Schedule of Quality Management Information.**

## 2.3 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

Tenderers must demonstrate their capacity to manage occupational health and safety in accordance with the NSW Government *Occupational Health and Safety Management Systems Guidelines 4<sup>th</sup> Edition (OHSM Guidelines)*. The *OHSM Guidelines* are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

Submit with the Tender the information identified in Tender Schedules - **Schedule of Occupational Health and Safety Management Information.**

If the Tenderer does not have an accredited Corporate OHS Management System, submit with the Tender an undertaking that the Tenderer's Corporate OHS Management System will be revised to comply with the *OHSM Guidelines* and submitted to the Department of Commerce for accreditation within two (2) weeks after the close of tenders.

## 2.4 ENVIRONMENTAL MANAGEMENT

Tenderers must demonstrate their capacity to manage environmental matters in accordance with the NSW Government *Environmental Management Systems Guidelines (EMS Guidelines)* available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

Submit the information identified in Tender Schedules - **Schedule of Environmental Management Information.**

## 2.5 FINANCIAL ASSESSMENT CRITERIA

The main criteria considered in financial assessment of tenderers are:

- Net Worth (total assets, excluding any assets of company directors, less total liabilities less intangible assets);
- Current Ratio (ratio of current assets to current liabilities); and
- Working Capital (current assets less current liabilities).

The Principal considers tenders with the following financial capacity, and no other significant detrimental financial characteristics to be financially satisfactory in respect of tenders:

- Net Worth exceeds 5% of the Contract Sum or initial Contract Price;
- Current Ratio exceeds 1; and

- Working Capital exceeds 10% of the Contract Sum or initial Contract Price.
- Where a tenderer is a trustee the total value of trust beneficiaries' loans to the trustee must be greater than the total value of trust beneficiaries' loans from the trustee.

Deviations below these indicative criteria will not necessarily prevent the Principal from considering any tender.

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### 3 CONTRACT DETAILS

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#### 3.1 INSURANCE

##### Works and public liability insurance

The Principal will arrange insurance of the Works (and any temporary works) and public liability, as required under General Conditions of Contract clause **Insurance**. Tenderers are not required to allow in tenders for payment of premiums for insurance of the Works or public liability.

The insurance policy is available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_contract\\_management\\_insurance\\_policies.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_contract_management_insurance_policies.doc)

The insurance broker is Jardine Lloyd Thompson Pty Ltd.

##### Asbestos liability insurance

The Contractor must arrange any asbestos related insurance required by law. Any other asbestos related insurance is at the discretion of the Contractor. The Contractor is not entitled to any additional payments for asbestos related insurance. The Principal does not require the Contractor to hold any particular Asbestos Liability Insurance under General Conditions of Contract clause **Insurance**.

##### Other Insurance

The Contractor must arrange and pay all premiums for all other insurance required under General Conditions of Contract clause – **Insurance**.

For professional indemnity insurance, a Certificate of Currency or evidence of the ability to obtain the required insurance, such as a letter from a broker or insurer, may be required as a condition of acceptance of tender.

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### 4 CURRENT POLICIES

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#### 4.1 GOODS AND SERVICES TAX

The tendered lump sum and/or rates must include GST if it is payable.

#### 4.2 NSW GOVERNMENT PREFERENCE SCHEME

##### Preference

The Principal will give a preference advantage to goods of Australian and New Zealand origin over imported goods supplied under the Contract. NSW country manufacturers may be eligible for an additional preference under the Country Industries Preference Scheme (CIPS). Details of these schemes may be obtained from the Department of State and Regional Development, telephone (02) 9338-6780; facsimile (02) 9338-6676.

The Industry Capability Network Office has been established to provide assistance in planning for, purchasing and using Australian and New Zealand made products. The office can provide professional advice on local industry capability and on the availability and efficiency of local supplies suited to Australian conditions, while retaining commercial confidentiality. The Industry Capability Network Office may be contacted on: telephone (02) 9819 7200; facsimile (02) 9181 3321; e-mail [enquiry@icnsw.org.au](mailto:enquiry@icnsw.org.au); internet [www.icnsw.org.au](http://www.icnsw.org.au).

### Imported Goods

Where imported goods are proposed, complete the Tender Schedules - **Schedule of Imported Materials and Equipment**. Provide details of alternatives to such goods which are of Australian or New Zealand origin, or give reasons why such alternatives cannot be supplied by completing the Tender Schedules - **Schedule of Alternatives to Imported Goods**.

The Principal may, but is not bound to, negotiate a reduction in price to accept the imported goods, but the reduction will be not less than 20% of the Principal's estimate of the imported value of the goods.

Refer to Preliminaries clause - **Australian and New Zealand Goods**.

### NSW Country Manufactured Goods

If the tenderer wishes to seek preference under the NSW Country Industries Preference Scheme, submit Tender Schedules – **Schedule of NSW country manufactured goods** with the tender.

## 4.3 DISCLOSURE OF TENDER AND CONTRACT INFORMATION

Details of this tender and contract awarded as a result of this tender process must be disclosed in accordance with the *Freedom of Information Act 1989* (NSW), Premier's Memorandum 2007-01 and the NSW Government Tendering Guidelines which are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

## 4.4 EXCHANGE OF INFORMATION BETWEEN GOVERNMENT AGENCIES

By submitting a tender, the Tenderer authorises the Principal to gather, monitor, assess, and communicate to other NSW Government agencies or local government authorities information about the Tenderer's financial position and its performance in respect of any contract awarded as a result of the tender process. Such information may be used by those agencies or authorities in considering whether to offer the Tenderer future opportunities for work.

## 4.5 FINANCIAL ASSESSMENT

By tendering for this Contract, the Tenderer agrees that the Principal may engage private sector consultants to financially assess tenderers. Financial details of tenderers may be obtained by an external Financial Assessor for assessment. Financial Assessors have a contract with the Principal to safeguard the financial details obtained. Financial Assessors must not disclose such details, either in whole or in part to any party other than NSW Government departments or agencies without the express written permission of the tenderer.

The Financial Assessor is Kingsway Financial Assessments Pty Ltd.

Submit, when requested by the Financial Assessor or Principal, the Financial Assessment information shown in Tender Schedules - **Schedule of Financial Assessment Information**.

#### 4.6 INDUSTRIAL RELATIONS MANAGEMENT

Tenderers must demonstrate their capacity to plan and manage industrial relations (IR) and implement effective IR plans in accordance with the NSW Government *Industrial Relations Management Guidelines*. The Guidelines are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

Submit when requested:

- Copies of any enterprise, workplace or other enforceable industrial relations agreements to which the Tenderer is bound; and
- Tender Schedules - **Schedule of Industrial Relations Information**.

#### 4.7 UNCONDITIONAL UNDERTAKINGS - APPROVED INSTITUTIONS

For the purpose of giving unconditional undertakings, the Principal has approved banks, building societies, credit unions and insurance companies listed by the Australian Prudential Regulation Authority (APRA) as being regulated by the APRA. Lists appear at the APRA website at:

[www.apra.gov.au/](http://www.apra.gov.au/)

The Principal is prepared to consider proposals from tenderers for the approval of Unconditional Undertakings by substantial financial institutions, not registered by APRA, which lawfully carry on business in Australia. The Principal may require the submission of evidence demonstrating the substance and status of any proposed financial institution without cost to the Principal.

### 5 FURTHER INFORMATION

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#### 5.1 ADDENDA TO TENDER DOCUMENTS

If, as a result of a request for clarification from a tenderer or for any other reason, the Principal issues an instruction amending the tender documents, the instruction will be issued in writing to all tenderers in the form of an Addendum, which becomes part of the tender documents. Written Addenda issued by the Principal are the only recognised explanations of, or amendments to, the tender documents.

#### 5.2 SITE ACCESS RESTRICTIONS

Tenderers and their agents or representatives must:

- obtain permission to inspect the Site from the Client's Representative at least 48 hours before access to the Site is required;
- upon arrival, at the pre-arranged time, introduce themselves at the Client Representative's office prior to undertaking their inspection of the Site.

The Client's Representative's details are:

Name:	Ms Nensi Knezevic
Telephone number:	(02) 9561 8261
Facsimile Number:	(02) 9561 8438
e-mail address:	Nensi.Knezevic@det.nsw.edu.au

The Client's Representative may be contacted:

on the following days: Monday to Friday (except December 25-January 1 inclusive)

between the hours of: 8:30am – 4:30pm

Tenderers should telephone the Contact Person if they experience difficulty in securing an appointment with the Client's Representative for a site inspection.

### 5.3 PRE-TENDER MEETING

A pre-tender meeting will be held on the date, at the time and at the place nominated in the advertisement or invitation.

The Contact Person will be available at that time to answer any tenderer's queries regarding the tender.

## 6 PREPARATION OF TENDERS

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### 6.1 ALTERNATIVE TENDERS

The Principal may consider alternative tenders, provided the alternative tender meets the scope, functional intent and design concept expressed in the tender document. Where an alternative tender is proposed, submit a detailed description of the alternative stating clearly the manner in which it differs from the detailed requirements of the tender documents and including separate tender schedules applicable to the alternative.

### 6.2 TECHNICAL DATA

Submit, when requested, the details shown in Tender Schedules - **Schedule of Technical Data**.

## 7 SUBMISSION OF TENDERS

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### 7.1 DOCUMENTS TO BE SUBMITTED

The following documents must be completed and submitted by the Tenderer:

- Tender Form, Lighting Upgrade to Four Schools – Illawarra Region
- Schedule of Prices - Lump Sum Items, Lighting Upgrade to Four Schools – Illawarra Region
- Schedule of Rates for Variations - for Lighting Upgrade to Four Schools – Illawarra Region
- Schedule of Technical Data
- Schedule of Imported Materials and Equipment
- Schedule of Alternatives to Imported Goods
- Schedule of NSW Country Manufactured Goods
- Schedule of Quality Management Information
- Schedule of Occupational Health and Safety Management Information

- Schedule of Environmental Management Information
- All other Tender Schedules marked “Submit with Tender Form”

Where applicable, refer to each Addendum and state that the Tender allows for the instructions given in the Addendum.

## 7.2 SUBMISSION PROCEDURE

Submit the Tender Form, Tender Schedules marked ‘Submit with the Tender Form’ and other required documents or information by the date and time given in the advertisement or invitation, by any of the following methods:

- eTendering,
- Tender Box,
- Facsimile.

If more than one tender submission is made, mark each submission clearly as to whether it is a copy, an alternative tender, or whether the submission supersedes another submission.

Submit when requested, by the date, time and method stipulated in the request, Tender Schedules marked ‘Submit when requested’ and any other information required to allow further consideration of the Tender. Failure to meet this requirement may result in the Tender being passed over.

## 7.3 ETENDERING

<mailto:Tenders@commerce.nsw.gov.au> Tenderers are encouraged to obtain Requests for Tenders (RFT) and submit tenders through NSW Government online eTendering at:

<https://tenders.nsw.gov.au>.

## Legal status

Tenders submitted electronically will be treated in accordance with the *Electronic Transactions Act 2000* (NSW), and given no lesser level of confidentiality, probity and attention than tenders submitted by other means.

Tenderers, by electronically submitting a tender, are taken to have accepted any conditions shown on the NSW Government eTendering web site.

The Principal may decline to consider for acceptance, tenders that cannot be effectively evaluated because they are incomplete or corrupt.

## Electronic Format for Submissions

Tenders submitted electronically must be in a file format that can be read, formatted, displayed and printed by Microsoft Word 2003, or any format required by the RFT.

Any CAD files submitted with an electronically lodged tender must be in DGN, DWG, or DXF format. The Principal uses Microstation and Tenderers must ensure that any CAD files submitted that will correctly display and print in Microstation.

## File Compression

Tenderers may compress electronic tenders in any format that can be decompressed by WinZip. Tenderers must not submit self-extracting (\*.exe) zip files.

## Change of Tender Form Text

Tenderers must not change existing text in electronic tender forms other than to insert required information.

## 7.4 TENDER BOX

The Tender may be submitted in the Tender Box at: <https://tenders.nsw.gov.au/commerce>

Or alternatively - Tender Box Level 3, McKell Building  
2-24 Rawson Place  
Sydney NSW

Submit the Tender in a sealed envelope addressed to the Tender Box Committee and marked with '0801772 - Tender for Lighting Upgrade to Four High Schools – Illawarra Region' and the closing date and time.

## 7.5 FACSIMILE

The Tender may be submitted to the following facsimile number:

**(02) 9372 8974**

Address the Tender to the Secretary of the Tender Opening Committee and mark the first page of the facsimile with 'Tender for Lighting Upgrade to Four High Schools – Illawarra Region (RFT 0801772)' and the closing date and time.

Tenders sent by facsimile and not completely received by the close of tenders may be excluded from consideration for acceptance even if transmission or receipt is delayed due to the receiving facsimile machine being engaged, faulty or otherwise inoperative.

## 7.6 ALTERNATIVE TENDER BOX AND FACSIMILE NUMBER

If in doubt that the Tender will reach the Tender Box, facsimile or eTendering website before close of tenders, the Tender may be submitted to:

NSW Department of Commerce,	NSW Department of Commerce,
Sydney Region Office,	South Coast Region,
Level 5, 2 Burbank Place,	Wollongong Office,
Norwest Business Park,	84 Crown Street,
Baulkham Hills, NSW, 2153	Wollongong, NSW 2500
Telephone number: (02) 9852 0275	<b>Fax: (02) 42268517</b>
<b>Fax: (02) 9852 0284</b>	

## 7.7 LATE TENDERS

In accordance with the NSW Government *Code of Practice for Procurement*, available on the Internet at:

[www.treasury.nsw.gov.au/procurement/cpfp\\_ig](http://www.treasury.nsw.gov.au/procurement/cpfp_ig)

late tenders will not be accepted, except where the integrity and competitiveness of the tendering process will not be compromised.

## 8 PROCEDURES AFTER CLOSING OF TENDERS

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### 8.1 EVALUATION OF TENDERS

In evaluating tenders, the Principal may take into consideration factors including, but not limited to: whole of life costs; ability to meet requirements of the NSW Government *Code of Practice for Procurement*; innovation; delivery time; quality offered; previous performance; experience; capability; occupational health and safety performance; industrial relations performance; environmental management performance; community relations; value adding including economic, social and environmental initiatives; and conformity.

The Principal may treat any detail required by the tender documents which is omitted, illegible or unintelligible as failing to fulfil the relevant requirement.

In addition to prices tendered, the Principal may take into consideration the following criteria:

- whole-of-life costs, including costs of disposal;
- ability to meet *NSW Code of Practice for Procurement* requirements;
- innovation offered;
- delivery times offered;
- quality offered;
- capability of tenderer, including technical, management, human resource, organisational and financial capability and capacity;
- tenderer's occupational and health and safety management practices and performance;
- tenderer's workplace and industrial relations management practices and performance;
- tenderer's environmental management practices and performance;
- tenderer's community relations practices and performance;
- value adding components such as economic, social and environmental development initiatives, if appropriate and relevant to the procurement; and
- conformity of tender with requirements.

### 8.2 ACCEPTANCE OF TENDER

The Principal may accept tenders that do not conform strictly with all requirements of the tender documents.

The Principal is not bound to accept the lowest or any tender. Tenders which do not comply with any requirement of, or which contain conditions or qualifications not required or allowed by, the tender document may be passed over.

No tender, or qualification or departure from a contract condition or specification, is accepted unless the Principal gives an acceptance or formal agreement in writing.

### 8.3 PROTECTION OF PRIVACY

The Tenderer warrants, in respect of any personal information provided in this Tender or any contract arising from this Tender, that the information is accurate, up to date and complete, and that nominated individuals authorise its collection and are aware:

- that the information is being collected for the purpose of evaluating tenders and administering any contracts arising from those tenders and may be made available to other NSW government agencies or local government authorities for those purposes;
- whether the supply of the information by the individual is required by law or is voluntary, and any consequences for the individual if the information (or any part of it) is not provided; and
- of the existence of any right of access to, and correction of, the information.

**END OF SECTION – CONDITIONS OF TENDERING**

## **TENDER SCHEDULES**

**[THERE ARE 36 PAGES IN THIS SECTION](#)**

## 1 TENDER FORM, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION

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Location and Fax No. of

Tender Closing Office:

<https://tenders.nsw.gov.au/commerce>

OR Level 3, McKell Building

2-24 Rawson Place

Sydney NSW 2000

Facsimile: (02) 9372 8974

Name of Tenderer

(in block letters):

.....

A.B.N.

(if applicable):

.....

Address:

.....

.....

Telephone number:

.....

Facsimile number:

.....

e-mail address:

.....

hereby tender(s) to perform the work for

Lighting Upgrade to Four High Schools – Illawarra Region

(Contract No. 0801772)

in accordance with the following documents:

TENDER DOCUMENT VOL. 1 SPECIFICATION

and Addenda Numbers: .....

For the lump sum of: .....

.....

(\$ ..... ) including GST

Signed for the Tenderer by:

.....

Date:.....

Name (in block letters):

.....

(Authorised Officer)

In the Office Bearer capacity of:

.....

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*Lighting Upgrade to Four High Schools - Illawarra Region*

Contract No: 0801772

Revision Date: 30/09/08

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Documentation\RFT 0801772.doc

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.1	Replace existing luminaires with 1x18W Batten luminaires	1							
1.2	Upgrade existing quantity of 1x20W Batten luminaires to 1x18W Batten luminaires	1		5		4		1	
1.3	Replace existing luminaires with 1x18W Batten with diffuser luminaires	2		2					
1.4	Upgrade existing quantity of 1x20W Batten with diffuser luminaires to 1x18W Batten with diffuser luminaires					6		1	
1.5	Replace existing luminaires with 1x36W Batten luminaires	1							
1.6	Upgrade existing quantity of 1x40W Batten luminaires to 1x36W Batten luminaires	4		4		3			
1.7	Replace existing luminaires with 1x36W Batten with diffuser luminaires	33		2				21	
1.8	Upgrade existing quantity of 1x40W Batten with diffuser luminaires to 1x36W Batten with diffuser luminaires	1		10		24		24	
SUBTOTAL ITEMS 1.1-1.8 INCLUSIVE			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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Revision Date: 30/09/08

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.9	Upgrade existing quantity of 1x65W Batten luminaires to 1x58W Batten luminaires			2		36			
1.10	Replace existing luminaires with 1x58W Batten with diffuser luminaires			1					
1.11	Upgrade existing quantity of 2x20W Batten luminaires to 2x18W Batten luminaires					8			
1.12	Replace existing luminaires with 2x18W Batten with diffuser luminaires	2						2	
1.13	Replace existing luminaires with 2x36W Batten luminaires							3	
1.14	Upgrade existing quantity of 2x40W Batten luminaires to 2x36W Batten luminaires					8		12	
1.15	Replace existing luminaires with 2x36W Batten with diffuser luminaires	11						19	
1.16	Upgrade existing quantity of 2x40W Batten with diffuser luminaires to 2x36W Batten with diffuser luminaires			2				32	
SUBTOTAL ITEMS 1.9-1.16 INCLUSIVE			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.17	Upgrade existing quantity of 2x65W Batten luminaires to 2x58W Batten luminaires			2		4			
1.18	Replace existing luminaires with 2x58W Batten with diffuser luminaires					1			
1.19	Maintain (clean & re-lamp) existing quantity of Compact Fluorescent luminaires			12		22			
1.20	Maintain (clean & re-lamp) existing quantity of HID Sphere luminaires			47		15			
1.21	Replace existing luminaires with Bulkhead type luminaires fitted with Compact Fluorescent lamp	5							
1.22	Maintain (clean & re-lamp) existing quantity of Incandescent lamp Bulkhead luminaires to Compact Fluorescent lamp luminaires	28						7	
1.23	Maintain (re-lamp) existing quantity of Incandescent Lamps to Compact Fluorescent Lamps	23		15		1		30	
1.24	Upgrade existing quantity of 1x20W Recessed luminaires to 1x18W Recessed luminaires							1	
SUBTOTAL ITEMS 1.17-1.24 INCLUSIVE			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.25	Upgrade existing quantity of 1x40W Recessed luminaires to 1x36W Recessed luminaires					24		3	
1.26	Upgrade existing quantity of 2x20W Recessed luminaires to 2x18W Recessed luminaires							1	
1.27	Upgrade existing quantity of 2x40W Recessed luminaires to 2x36W Recessed luminaires	17		8		75		37	
1.28	Upgrade existing quantity of 1x20W Surface Mounted Type E luminaires to 1x18W Surface Mounted Type E luminaires			7					
1.29	Upgrade existing quantity of 1x20W Surface Mounted Type E with Square sides luminaires to 1x18W Surface Mounted Type E with Square sides luminaires			38		10		8	
1.30	Upgrade existing quantity of 1x20W Surface Mounted with End Caps luminaires to 1x18W Surface Mounted with End Caps luminaires	11		2				1	
1.31	Upgrade existing quantity of 1x40W Surface Mounted Type E luminaires to 1x36W Surface Mounted Type E luminaires	8		27		33		4	
1.32	Upgrade existing quantity of 1x40W Surface Mounted Type E with Square sides luminaires to 1x36W Surface Mounted Type E with Square sides luminaires					70		5	
<b>SUBTOTAL ITEMS 1.25-1.32 INCLUSIVE</b>			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.33	Upgrade existing quantity of 1x40W Surface Mounted with End Caps luminaires to 1x36W Surface Mounted with End Caps luminaires	43		13		5		2	
1.34	Upgrade existing quantity of 1x65W Surface Mounted Type E luminaires to 1x58W Surface Mounted Type E luminaires			10					
1.35	Upgrade existing quantity of 1x65W Surface Mounted Type E with Square sides luminaires to 1x58W Surface Mounted Type E with Square sides luminaires							1	
1.36	Upgrade existing quantity of 2x20W Surface Mounted Type E luminaires to 2x18W Surface Mounted Type E luminaires			2		1			
1.37	Upgrade existing quantity of 2x20W Surface Mounted with End Caps luminaires to 2x18W Surface Mounted with End Caps luminaires	3		16		3		4	
1.38	Replace existing luminaires with 2x36W Surface Mounted Type E luminaires	4							
1.39	Upgrade existing quantity of 2x40W Surface Mounted Type E luminaires to 2x36W Surface Mounted Type E luminaires	96		33		432		46	
1.40	Replace existing luminaires with 2x36W Surface Mounted Type E with Square sides luminaires	27				24		22	
<b>SUBTOTAL ITEMS 1.33-1.40 INCLUSIVE</b>			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.41	Upgrade existing quantity of 2x40W Surface Mounted Type E with Square sides luminaires to 2x36W Surface Mounted Type E with Square sides luminaires							2	
1.42	Upgrade existing quantity of 2x40W Surface Mounted with End Caps luminaires to 2x36W Surface Mounted with End Caps luminaires	480		96		18		447	
1.43	Replace existing luminaires with 2x58W Surface Mounted Type E luminaires			18					
1.44	Upgrade existing quantity of 2x65W Surface Mounted Type E luminaires to 2x58W Surface Mounted Type E luminaires	57		201		92		4	
1.45	Replace existing luminaires with 2x58W Surface Mounted Type E with Square sides luminaires			4					
1.46	Upgrade existing quantity of 2x65W Surface Mounted Type E with Square sides luminaires to 2x58W Surface Mounted Type E with Square sides luminaires					6		3	
1.47	Upgrade existing quantity of 2x65W Surface Mounted with End Caps luminaires to 2x58W Surface Mounted with End Caps luminaires			158		4			
1.48	Upgrade existing quantity of 3x40W Surface Mounted Type E luminaires to 2x36W Surface Mounted Type E luminaires			4				1	
<b>SUBTOTAL ITEMS 1.41-1.48 INCLUSIVE</b>			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.49	Upgrade existing quantity of 3x40W Surface Mounted with End Caps luminaires to 2x36W Surface Mounted with End Caps luminaires	172		34				121	
1.50	Upgrade existing quantity of 3x65W Surface Mounted Type E luminaires to 2x58W Surface Mounted Type E luminaires			6					
1.51	Maintain (clean & re-lamp) existing quantity of 1xMV Suspended Cylindrical luminaires			55		40			
1.52	Upgrade existing quantity of 2x40W Tubelight luminaires to 2x36W Tubelight luminaires			9					
1.53	Replace existing luminaires with 1x18W Vandal Resistant luminaires	22				2		1	
1.54	Upgrade existing quantity of 1x20W Vandal Resistant luminaires to 1x18W Vandal Resistant luminaires	5		1		1		11	
1.55	Replace existing luminaires with 1x36W Vandal Resistant luminaires	12							
1.56	Upgrade existing quantity of 1x40W Vandal Resistant luminaires to 1x36W Vandal Resistant luminaires	3						4	
<b>SUBTOTAL ITEMS 1.49-1.56 INCLUSIVE</b>			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.57	Replace existing luminaires with 2x18W Vandal Resistant luminaires					2			
1.58	Upgrade existing quantity of 2x20W Vandal Resistant luminaires to 2x18W Vandal Resistant luminaires							12	
1.59	Replace existing luminaires with 2x36W Vandal Resistant luminaires					1		3	
1.60	Upgrade existing quantity of 2x40W Vandal Resistant luminaires to 2x36W Vandal Resistant luminaires	2		2		1		1	
1.61	Replace existing luminaires with 1x18W Weatherproof luminaires	1							
1.62	Upgrade existing quantity of 1x20W Weatherproof luminaires to 1x18W Weatherproof luminaires	48		126		46		20	
1.63	Upgrade existing quantity of 1x40W Weatherproof luminaires to 1x36W Weatherproof luminaires	1		41		15		15	
1.64	Upgrade existing quantity of 2x20W Weatherproof luminaires to 2x18W Weatherproof luminaires					2		63	
<b>SUBTOTAL ITEMS 1.57-1.64 INCLUSIVE</b>			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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TENDER SCHEDULES

## 2 SCHEDULE OF PRICES - LUMP SUM ITEMS, LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Insert the amount allowed for each of the following items.

This Schedule is for information only and does not form part of the Contract. Its purpose is to assist in valuing completed work, but the Principal is not bound to use it.

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Qty	Amount	Qty	Amount	Qty	Amount	Qty	Amount
1.65	Upgrade existing quantity of 2x40W Weatherproof luminaires to 2x36W Weatherproof luminaires					39		16	
1.66	Upgrade existing quantity of 4x20W Weatherproof luminaires to 4x18W Weatherproof luminaires					1			
1.67	Additional cost to upgrade a luminaire installed at a height above 3 metres	478		190		476		97	
1.68	Additional cost to replace a luminaire installed at a height above 3 metres	1							
2	All work and obligations under the Contract NOT INCLUDED ELSEWHERE in this Schedule								
SUBTOTAL ITEMS 1.65-2 INCLUSIVE			\$0.00		\$0.00		\$0.00		\$0.00
TOTAL SCHEDULE OF PRICES FOR CONTRACT WORKS			\$0.00		\$0.00		\$0.00		\$0.00

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

Lighting Upgrade to Four High Schools - Illawarra Region

Contract No: 0801772

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### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
1	Item 1.1 Variation in estimated quantities for Replace existing luminaires with 1x18W Batten luminaires								
2	Item 1.2 Variation in estimated quantities for Upgrade existing quantity of 1x20W Batten luminaires to 1x18W Batten luminaires								
3	Item 1.3 Variation in estimated quantities for Replace existing luminaires with 1x18W Batten with diffuser luminaires								
4	Item 1.4 Variation in estimated quantities for Upgrade existing quantity of 1x20W Batten with diffuser luminaires to 1x18W Batten with diffuser luminaires								
5	Item 1.5 Variation in estimated quantities for Replace existing luminaires with 1x36W Batten luminaires								
6	Item 1.6 Variation in estimated quantities for Upgrade existing quantity of 1x40W Batten luminaires to 1x36W Batten luminaires								
7	Item 1.7 Variation in estimated quantities for Replace existing luminaires with 1x36W Batten with diffuser luminaires								
8	Item 1.8 Variation in estimated quantities for Upgrade existing quantity of 1x40W Batten with diffuser luminaires to 1x36W Batten with diffuser luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
9	Item 1.9 Variation in estimated quantities for Upgrade existing quantity of 1x65W Batten luminaires to 1x58W Batten luminaires								
10	Item 1.10 Variation in estimated quantities for Replace existing luminaires with 1x58W Batten with diffuser luminaires								
11	Item 1.11 Variation in estimated quantities for Upgrade existing quantity of 2x20W Batten luminaires to 2x18W Batten luminaires								
12	Item 1.12 Variation in estimated quantities for Replace existing luminaires with 2x18W Batten with diffuser luminaires								
13	Item 1.13 Variation in estimated quantities for Replace existing luminaires with 2x36W Batten luminaires								
14	Item 1.14 Variation in estimated quantities for Upgrade existing quantity of 2x40W Batten luminaires to 2x36W Batten luminaires								
15	Item 1.15 Variation in estimated quantities for Replace existing luminaires with 2x36W Batten with diffuser luminaires								
16	Item 1.16 Variation in estimated quantities for Upgrade existing quantity of 2x40W Batten with diffuser luminaires to 2x36W Batten with diffuser luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

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Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
17	Item 1.17 Variation in estimated quantities for Upgrade existing quantity of 2x65W Batten luminaires to 2x58W Batten luminaires								
18	Item 1.18 Variation in estimated quantities for Replace existing luminaires with 2x58W Batten with diffuser luminaires								
19	Item 1.19 Variation in estimated quantities to Maintain (clean & re-lamp) existing quantity of Compact Fluorescent luminaires								
20	Item 1.20 Variation in estimated quantities to Maintain (clean & re-lamp) existing quantity of HID Sphere luminaires								
21	Item 1.21 Variation in estimated quantities to Replace existing luminaires with Bulkhead type luminaires fitted with Compact Fluorescent lamp								
22	Item 1.22 Variation in estimated quantities to Maintain (clean & re-lamp) existing quantity of Incandescent lamp Bulkhead luminaires to Compact Fluorescent lamp luminaires								
23	Item 1.23 Variation in estimated quantities to Maintain (re-lamp) existing quantity of Incandescent Lamps to Compact Fluorescent Lamps								
24	Item 1.24 Variation in estimated quantities for Upgrade existing quantity of 1x20W Recessed luminaires to 1x18W Recessed luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

**3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)**

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
25	Item 1.25 Variation in estimated quantities for Upgrade existing quantity of 1x40W Recessed luminaires to 1x36W Recessed luminaires								
26	Item 1.26 Variation in estimated quantities for Upgrade existing quantity of 2x20W Recessed luminaires to 2x18W Recessed luminaires								
27	Item 1.27 Variation in estimated quantities for Upgrade existing quantity of 2x40W Recessed luminaires to 2x36W Recessed luminaires								
28	Item 1.28 Variation in estimated quantities for Upgrade existing quantity of 1x20W Surface Mounted Type E luminaires to 1x18W Surface Mounted Type E luminaires								
29	Item 1.29 Variation in estimated quantities for Upgrade existing quantity of 1x20W Surface Mounted Type E with Square sides luminaires to 1x18W Surface Mounted Type E with Square sides luminaires								
30	Item 1.30 Variation in estimated quantities for Upgrade existing quantity of 1x20W Surface Mounted with End Caps luminaires to 1x18W Surface Mounted with End Caps luminaires								
31	Item 1.31 Variation in estimated quantities for Upgrade existing quantity of 1x40W Surface Mounted Type E luminaires to 1x36W Surface Mounted Type E luminaires								
32	Item 1.32 Variation in estimated quantities for Upgrade existing quantity of 1x40W Surface Mounted Type E with Square sides luminaires to 1x36W Surface Mounted Type E with Square sides luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

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Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
33	Item 1.33 Variation in estimated quantities for Upgrade existing quantity of 1x40W Surface Mounted with End Caps luminaires to 1x36W Surface Mounted with End Caps luminaires								
34	Item 1.34 Variation in estimated quantities for Upgrade existing quantity of 1x65W Surface Mounted Type E luminaires to 1x58W Surface Mounted Type E luminaires								
35	Item 1.35 Variation in estimated quantities for Upgrade existing quantity of 1x65W Surface Mounted Type E with Square sides luminaires to 1x58W Surface Mounted Type E with Square sides luminaires								
36	Item 1.36 Variation in estimated quantities for Upgrade existing quantity of 2x20W Surface Mounted Type E luminaires to 2x18W Surface Mounted Type E luminaires								
37	Item 1.37 Variation in estimated quantities for Upgrade existing quantity of 2x20W Surface Mounted with End Caps luminaires to 2x18W Surface Mounted with End Caps luminaires								
38	Item 1.38 Variation in estimated quantities for Replace existing luminaires with 2x36W Surface Mounted Type E luminaires								
39	Item 1.39 Variation in estimated quantities for Upgrade existing quantity of 2x40W Surface Mounted Type E luminaires to 2x36W Surface Mounted Type E luminaires								
40	Item 1.40 Variation in estimated quantities for Replace existing luminaires with 2x36W Surface Mounted Type E with Square sides luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

**3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)**

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

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Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
41	Item 1.41 Variation in estimated quantities for Upgrade existing quantity of 2x40W Surface Mounted Type E with Square sides luminaires to 2x36W Surface Mounted Type E with Square sides luminaires								
42	Item 1.42 Variation in estimated quantities for Upgrade existing quantity of 2x40W Surface Mounted with End Caps luminaires to 2x36W Surface Mounted with End Caps luminaires								
43	Item 1.43 Variation in estimated quantities for Replace existing luminaires with 2x58W Surface Mounted Type E luminaires								
44	Item 1.44 Variation in estimated quantities for Upgrade existing quantity of 2x65W Surface Mounted Type E luminaires to 2x58W Surface Mounted Type E luminaires								
45	Item 1.45 Variation in estimated quantities for Replace existing luminaires with 2x58W Surface Mounted Type E with Square sides luminaires								
46	Item 1.46 Variation in estimated quantities for Upgrade existing quantity of 2x65W Surface Mounted Type E with Square sides luminaires to 2x58W Surface Mounted Type E with Square sides luminaires								
47	Item 1.47 Variation in estimated quantities for Upgrade existing quantity of 2x65W Surface Mounted with End Caps luminaires to 2x58W Surface Mounted with End Caps luminaires								
48	Item 1.48 Variation in estimated quantities for Upgrade existing quantity of 3x40W Surface Mounted Type E luminaires to 2x36W Surface Mounted Type E luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

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Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
49	Item 1.49 Variation in estimated quantities for Upgrade existing quantity of 3x40W Surface Mounted with End Caps luminaires to 2x36W Surface Mounted with End Caps luminaires								
50	Item 1.50 Variation in estimated quantities for Upgrade existing quantity of 3x65W Surface Mounted Type E luminaires to 2x58W Surface Mounted Type E luminaires								
51	Item 1.51 Variation in estimated quantities to Maintain (clean & re-lamp) existing quantity of 1xMV Suspended Cylindrical luminaires								
52	Item 1.52 Variation in estimated quantities for Upgrade existing quantity of 2x40W Tubelight luminaires to 2x36W Tubelight luminaires								
53	Item 1.53 Variation in estimated quantities for Replace existing luminaires with 1x18W Vandal Resistant luminaires								
54	Item 1.54 Variation in estimated quantities for Upgrade existing quantity of 1x20W Vandal Resistant luminaires to 1x18W Vandal Resistant luminaires								
55	Item 1.55 Variation in estimated quantities for Replace existing luminaires with 1x36W Vandal Resistant luminaires								
56	Item 1.56 Variation in estimated quantities for Upgrade existing quantity of 1x40W Vandal Resistant luminaires to 1x36W Vandal Resistant luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

**3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)**

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
57	Item 1.57 Variation in estimated quantities for Replace existing luminaires with 2x18W Vandal Resistant luminaires								
58	Item 1.58 Variation in estimated quantities for Upgrade existing quantity of 2x20W Vandal Resistant luminaires to 2x18W Vandal Resistant luminaires								
59	Item 1.59 Variation in estimated quantities for Replace existing luminaires with 2x36W Vandal Resistant luminaires								
60	Item 1.60 Variation in estimated quantities for Upgrade existing quantity of 2x40W Vandal Resistant luminaires to 2x36W Vandal Resistant luminaires								
61	Item 1.61 Variation in estimated quantities for Replace existing luminaires with 1x18W Weatherproof luminaires								
62	Item 1.62 Variation in estimated quantities for Upgrade existing quantity of 1x20W Weatherproof luminaires to 1x18W Weatherproof luminaires								
63	Item 1.63 Variation in estimated quantities for Upgrade existing quantity of 1x40W Weatherproof luminaires to 1x36W Weatherproof luminaires								
64	Item 1.64 Variation in estimated quantities for Upgrade existing quantity of 2x20W Weatherproof luminaires to 2x18W Weatherproof luminaires								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
65	Item 1.65 Variation in estimated quantities for Upgrade existing quantity of 2x40W Weatherproof luminaires to 2x36W Weatherproof luminaires								
66	Item 1.66 Variation in estimated quantities for Upgrade existing quantity of 4x20W Weatherproof luminaires to 4x18W Weatherproof luminaires								
67	Item 1.67 Variation in estimated quantities to upgrade a luminaire installed at a height above 3 metres								
68	Item 1.68 Variation in estimated quantities to replace a luminaire installed at a height above 3 metres								
69	New quantities for maintaining (cleaning and re-lamping) HID luminaires, such as high bay, low bay & downlight types.								
70	Replacement 1x18 Watt surface mounted Type E luminaire								
71	Replacement 2x18 Watt surface mounted Type E luminaire								
72	Replacement 1x36 Watt surface mounted Type E luminaire								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

**3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)**

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
73	Replacement 1x58 Watt surface mounted Type E luminaire								
74	Replacement 2x18W Weatherproof luminaire								
75	Replacement 1x36W Weatherproof luminaire								
76	Replacement 2x36W Weatherproof luminaire								
77	Additional wiring to a new fitting (include 10 metres of wiring in rectangular conduit)								
78	Replace broken light switch and switch plate								
79	Rate for removal and disposal of capacitors containing PCB up to a weight of 1kg								
80	Rate per additional kg for removal and disposal of capacitors containing PCB								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

**3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)**

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
81	Supply and install replacement lens for Type E 1x18 Watt luminaire								
82	Supply and install replacement lens for Type E 2x18 Watt luminaire								
83	Supply and install replacement lens for Type E 1x36 Watt luminaire								
84	Supply and install replacement lens for Type E 2x36 Watt luminaire								
85	Supply and install replacement lens for Type E 1x58 Watt luminaire								
86	Supply and install replacement lens for Type E 2x58 Watt luminaire								
87	Supply and install replacement lens for Type V 1x18 Watt luminaire								
88	Supply and install replacement lens for Type V 2x18 Watt luminaire								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

### 3 SCHEDULE OF RATES FOR VARIATIONS - LIGHTING UPGRADE TO FOUR HIGH SCHOOLS – ILLAWARRA REGION (CONTINUED)

(SUBMIT WITH TENDER FORM)

Complete this Schedule by inserting the rate for additions and rate for deletions for each item. These rates shall be used for additional or deletion of items from the contract.

The two rates shall form part of the Contract and shall be used to assess tenders. The rate for additions are to include labour, materials and profit..

**All amounts must include an amount for GST.**

Item No.	Description	Figtree High School		Nowra High School		Vincentia High School		Warilla High School	
		Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit	Addition \$/unit	Deletion \$/unit
89	Supply and install replacement lens for Type V 1x36 Watt luminaire								
90	Supply and install replacement lens for Type V 2x36 Watt luminaire								
91	Supply and install specular reflector to upgraded 2x36 Watt luminaire								
92	Supply and install specular reflector to upgraded 2x58 Watt luminaire								
93	Supply and install replacement hinges (3 off) for Type E luminaire								
94	Supply and install replacement clips (3 off) for Type E luminaire								
95	Supply and install replacement terminal block								
96	Supply, install and set to work a Passive Infra-Red Light Controller, including necessary control wiring								
97	Supply, install and set to work an Electro-Mechanical Timer Light Controller, including necessary control wiring								
98	Supply and install 3 phase AC1 20 Amp contactor in an enclosure, to switch several lighting circuits from one light controller, including control wiring								
99	Rate per optional digital image to record upgraded or replaced luminaires in each room and forward in DVD.								

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

#### 4 SCHEDULE OF IMPORTED MATERIALS AND EQUIPMENT

(SUBMIT WITH TENDER FORM)

Provide brief details of all imported materials and equipment to be supplied or incorporated into the Works, and country of manufacture or origin. Do not include goods manufactured in New Zealand.

The value of the imported content must be the estimated duty paid value inclusive of the value of any services (eg. overseas freight and insurance, software in computer tenders, consultancy or engineering fees) or any charges of overseas origin, together with customs clearing charges.

This is not a Schedule of Rates within the meaning of the Construction Contract Conditions. See also Preliminaries Clause - **Australian and New Zealand goods.**

Description	Country of Origin	Value A\$
.....	.....	\$ .....
.....	.....	\$ .....
.....	.....	\$ .....
.....	.....	\$ .....
.....	.....	\$ .....
.....	.....	\$ .....
.....	.....	\$ .....

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

*Lighting Upgrade to Four High Schools - Illawarra Region*

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## 5 SCHEDULE OF ALTERNATIVES TO IMPORTED GOODS

(SUBMIT WITH TENDER FORM)

Provide brief details of materials and equipment of Australian and/or New Zealand manufacture as alternatives to imported materials and equipment as listed in the SCHEDULE OF IMPORTED MATERIALS AND EQUIPMENT, or give reasons why such alternatives cannot be provided.

The Principal may accept a tender specifying all or any of the items listed below, with an adjustment to the contract price based on the difference between the prices listed in this Schedule and the SCHEDULE OF IMPORTED MATERIALS AND EQUIPMENT.

Description of Australian and/or New Zealand manufactured Alternatives	Value A\$
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....
.....	\$ .....

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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## 6 SCHEDULE OF NSW COUNTRY MANUFACTURED GOODS

(SUBMIT WITH TENDER FORM)

Complete the Schedule if you wish to seek preference under the NSW Country Industry Preference Scheme (CIPS.). The preference may be given only to a Tenderer who is a NSW manufacturer registered under the scheme.

State your CIPS. registration number. Give details of the materials and equipment to be supplied or incorporated into the Works, the place of manufacture, the percentage(s) applicable for preference purposes and the value added content at the Tenderer's works for the material or equipment manufactured by the Tenderer for incorporation in the Works.

This is not a Schedule of Rates within the meaning of the Construction Contract Conditions.

**C.I.P.S. Registration No.:** .....

Description	Place of Manufacture	% Applicable	Value Added Content \$
.....	.....	.....	\$ .....
.....	.....	.....	\$ .....
.....	.....	.....	\$ .....
.....	.....	.....	\$ .....
.....	.....	.....	\$ .....

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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## 7 SCHEDULE OF TECHNICAL DATA

(SUBMIT WITH TENDER FORM)

List all information required by this Schedule, and attach details of manufactures product data together with illustrations as are necessary to fully describe the Tenderer's offer.

Item	Tenderer's offer
Replacement 2 x 36 Watt surface mounted Type E luminaires with square sides for food preparation areas (include circuit rating, type, manufacturer and cat no.)	
Replacement 1 x 36 Watt Vandal Resistant Type V luminaires (include circuit rating, type, manufacturer and cat no.)	
Replacement 1 x 36W Battens (include circuit rating, type, manufacturer and cat no.)	
58 Watt Lamps (include rating, type, colour, manufacturer and cat no.)	
36 Watt Lamps (include rating, type, colour, manufacturer and cat no.)	
18 Watt Lamps (include rating, type, colour, manufacturer and cat no.)	
Ballast in twin 58W lamp luminaires (include loss rating, type, manufacturer and cat no.)	
Ballast in single 58W lamp luminaires (include loss rating, type, manufacturer and cat no.)	
Ballast in twin 36W lamp luminaires (include loss rating, type, manufacturer and cat no.)	
Ballast in single 36W lamp luminaires (include loss rating, type, manufacturer and cat no.)	
Ballast in twin 18W lamp luminaires (include loss rating, type, manufacturer and cat no.)	
Ballast in single 18W lamp luminaires (include loss rating, type, manufacturer and cat no.)	
Ballast EEI Class (include type)	
Number of ballasts in twin lamp luminaires (one or two)	
If one ballast is to be provided for a twin lamp luminaire, will it support one lamp when the other fails (Yes or No)	
Specular Reflector as applicable (include type, manufacturer and catalogue number)	

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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**7 SCHEDULE OF TECHNICAL DATA (CONTINUED)**

(SUBMIT WITH TENDER FORM)

List all information required by this Schedule, and attach details of manufactures product data together with illustrations as are necessary to fully describe the Tenderer's offer.

<b>LUMINAIRE AND LIGHTING SYSTEM PERFORMANCE</b>	<b>RATING</b>
Light Output Ratio (%) for a replacement or upgraded 2 x 36W lamp Type E enclosed luminaires	
Light Output Ratio (%) for a replacement or upgraded 2 x 36W lamp Type E enclosed luminaires with Specular Reflector	
Light Output Ratio (%) for a replacement or upgraded 1 x 36W lamp Type E enclosed luminaires	
Light Output Ratio (%) for a replacement or upgraded 1 x 36W lamp Type E enclosed luminaires with Specular Reflector	
Estimated Glare Index in a typical Teaching Room for luminaires	

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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## 8 SCHEDULE OF QUALITY MANAGEMENT INFORMATION

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(SUBMIT WITH TENDER FORM)

Submit one of the following, to demonstrate the capacity to plan and manage the quality of work:

- evidence of current full certification of the Tenderer's Quality Management System to AS/NZS ISO 9001:2000 by a certifying body registered with the Joint Accreditation System - Australia and New Zealand (JAS-ANZ); **or**
- evidence that the Tenderer's Quality Management System complies with the NSW Government *Quality Management Systems Guidelines (QMS Guidelines)*; **or**
- a minimum of three (3) completed examples of Inspection and Test Plans used on recent past projects and complying with the requirements of the *QMS Guidelines*.

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

---

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## 9 SCHEDULE OF OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT INFORMATION

(SUBMIT WITH TENDER FORM)

Provide documents and information indicated below in accordance with Conditions of Tendering clause – **Occupational health and safety management.**

### Accreditation of OHS Management System

Submit a copy of a letter from a NSW Government Construction Agency evidencing that the Tenderer's OHS Management System has been accredited as complying with the *NSW Government Occupational Health and Safety Management Systems Guidelines 4<sup>th</sup> Edition (OHSM Guidelines)*.

Alternatively, submit a statement confirming that the Tenderer's OHS Management System will be revised to comply with the *OHSM Guidelines* and submitted to the Department of Commerce for accreditation within 2 weeks after the close of tenders.

### Evidence of satisfactory OHS management

Nominate at least three contracts/projects completed within the last two years that demonstrate successful management of occupational health and safety by the Tenderer:

Client	Name & location of contract <i>E.g. Sutherland Hospital Carpark; Dubbo Water Treatment Plant; Tamworth Coles shopping Centre; 3 Storey Unit Block, Penrith.</i>	Contract Price/ Project Value	Start Date	Completion Date

**WHEN REQUESTED**, submit the following additional information for each of three contracts/projects selected from the above list:

- a client referee report (which may be a NSW Government agency Contractor Performance Report) commenting on the Tenderer's performance in relation to occupational health and safety management, identifying the referee's name, position, organisation and telephone and email contact details; **and**
- a copy of a third party audit report, **or** internal audit report, **or** site safety inspection report, **or** site safety review report **or** other similar evidence.

### Recent OHS prosecutions and fines

Provide:

- a statement confirming that the Tenderer is not in default of any fine issued for a breach of the OHS legislation; **AND**
- details of every OHS prosecution and fine imposed on the Tenderer in Australia during the last two years, together with a description of actions taken by the

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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## TENDER SCHEDULES

Tenderer in response to each prosecution and fine; or

- a statement that the Tenderer incurred no prosecutions or fines during the last two years.

### **Hazardous substances**

**WHEN REQUESTED**, submit details of proposed:

- i) methods for surveying for hazardous materials;
- ii) methods for handling and removal from the Site of hazardous materials; and
- iii) Consultants and Subcontractors and licence details.

### **Occupational Health and Safety Management Monthly Report**

The Tenderer undertakes, if awarded the Contract, to provide Monthly OHS Management Reports as described in Preliminaries clause – **Occupational Health and Safety Management**.

### **Independent certification of formwork**

The Tenderer undertakes, if awarded the Contract, to provide evidence of independent certification of formwork as required by Preliminaries clause – **Occupational Health and Safety Management**.

Signed for the Tenderer by: ..... Date:.....  
Name (in block letters): ..... (Authorised Officer)  
In the Office Bearer capacity of: .....

*Lighting Upgrade to Four High Schools - Illawarra Region*

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## 10 SCHEDULE OF ENVIRONMENTAL MANAGEMENT INFORMATION

(SUBMIT WITH TENDER FORM)

Provide the documents and information specified below in accordance with Conditions of Tendering clause - **Environmental management**.

### Accreditation of corporate Environmental Management System

Submit a copy of a letter from a NSW government construction agency evidencing that the Tenderer's corporate Environmental Management System has been accredited under the NSW Government *Environmental Management Systems Guidelines (EMS Guidelines)*.

Alternatively, submit a statement confirming that the Tenderer's corporate Environmental Management System will be revised to comply with the EMS Guidelines and submitted to the Department of Commerce for accreditation within 2 calendar weeks after the close of tenders.

### Recent prosecutions and fines

Submit:

- a statement confirming that the Tenderer is not in default of any fine issued for a breach of environmental legislation; **and**
- details of every prosecution and fine incurred by the Tenderer during the last two years under the *Protection of the Environment Operations Act 1997 (POEO Act)* or other Australian environmental legislation, together with a description of the actions taken by the Tenderer in response to each prosecution and fine; **or**
- a statement that the Tenderer incurred no prosecutions or fines under environmental legislation during the last two years.

### Evidence of satisfactory environmental management

Nominate at least three contracts/projects, for work of comparable nature to the Works and completed within the last two years, that demonstrate successful environmental management by the Tenderer:

Client	Name & location of contract <i>E.g. Concord Hospital Carpark; Dubbo Water Treatment Plant; Tamworth Coles shopping Centre; 3 Storey Unit Block, Penrith.</i>	Contract Price/ Project Value	Start Date	Completion Date

- **WHEN REQUESTED**, submit a copy of an Environmental Management Plan implemented by the Tenderer for a contract/project, similar in type and value to this Contract, that was completed within the last two years

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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**Environmental management objectives and measures**

- **WHEN REQUESTED**, submit details of:
- environmental management objectives proposed for the work under the Contract;
- key environmental management actions proposed for the work under the Contract; and
- the persons who will be responsible for managing the actions proposed.

Signed for the Tenderer by: ..... Date:.....  
Name (in block letters): ..... (Authorised Officer)  
In the Office Bearer capacity of: .....

## 11 SCHEDULE OF FINANCIAL ASSESSMENT INFORMATION

(SUBMIT WHEN REQUESTED BY PRINCIPAL OR FINANCIAL ASSESSOR)

Provide documents and information listed below in accordance with Clause Conditions of Tendering - **Financial assessment.**

1. Financial Statements for last three years for the entity under consideration, including:
  - i) Balance Sheets;
  - ii) Profit and Loss Statement;
  - iii) detailed Profit and Loss Statement;
  - iv) statement of Cash Flows;
  - v) notes to and Forming Part of the Accounts;
  - vi) an Accountant's Report; and
  - vii) where existing, Auditor's Reports.

Consolidated accounts of a parent organisation or group to which the entity belongs are not acceptable.
2. Where latest financial statement is more than 6 months old, the latest management report showing:
  - i) a trading statement;
  - ii) a profit and loss statement; and
  - iii) a trial balance.
3. Where the company is required to lodge audited financial statements with ASIC, copies of these statements for the last three years.
4. Where any financial statement supplied is not audited, copies of the entity's tax returns for last three years.
5. A letter from the Tenderer's banker providing details of overdraft and guarantee facilities including:
  - i) Bank, Branch, and Account Names,
  - ii) type and limit of bank overdraft facility,
  - iii) type and limit of bank guarantee facility,
  - iv) current bank overdraft balance,
  - v) number and amount of bank guarantees outstanding; and
  - vi) details of other bank funding facilities available to the Tenderer, such as term loans, lines of credit, commercial bills and other debt instruments.
6. Current and projected cash flows for all work on hand.
7. Forecast budget for forthcoming financial year including Revenue and Profit and Loss.
8. Names and contact numbers of:
  - i) major suppliers; and
  - ii) major subcontractors.
9. Details relating to the Tenderer's history and Directors Profiles.

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

*Lighting Upgrade to Four High Schools - Illawarra Region*

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## 12 SCHEDULE OF INDUSTRIAL RELATIONS INFORMATION

(SUBMIT WHEN REQUESTED)

List the Federal and NSW awards to which the Tenderer is bound:

### **Federal and NSW awards**

.....

.....

.....

.....

.....

.....

.....

.....

List the enterprise, workplace or other enforceable industrial relations agreements to which the Tenderer is bound, and attach copies of those agreements to this Schedule

### **Enterprise, workplace and other enforceable industrial relations agreements**

.....

.....

.....

.....

.....

.....

.....

.....

### **Undertaking to Provide information**

The Tenderer, if awarded the contract, will, on request, provide appropriate information to verify compliance with these awards, enterprise or workplace agreements and all other legal obligations relating to employment.

Signed for the Tenderer by: ..... Date:.....

Name (in block letters): ..... (Authorised Officer)

In the Office Bearer capacity of: .....

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### 13 UNDERTAKING TO COMPLY WITH THE NSW GOVERNMENT CODE OF PRACTICE FOR PROCUREMENT .

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(SUBMIT WHEN REQUESTED)

The Tenderer, if awarded the Contract, will comply with the NSW Government *Code of Practice for Procurement*.

Signed for the Tenderer by: ..... Date:.....  
Name (in block letters): ..... (Authorised Officer)  
In the Office Bearer capacity of: .....

*TENDER SCHEDULES*

**END OF SECTION –TENDER SCHEDULES**

# SPECIFICATION

# 1 GENERAL CONDITIONS OF CONTRACT AND ANNEXURE

[THERE ARE 23 PAGES IN THIS SECTION](#)

## GENERAL CONDITIONS OF CONTRACT - MINOR WORKS

### 1 DEFINITIONS

- 1.1** The Principal is as stated in the Annexure.
- 1.2** The Principal's Representative is as stated in the Annexure and is the person appointed by the Principal to act with its full authority in all matters relating to the Contract.
- 1.3** The Principal's Agent is as stated in the Annexure.
- 1.4** The Works means the whole of the work to be carried out and materials and services to be provided under the Contract.
- 1.5** The Contract Sum means:
- (a) where the Principal accepted a lump sum, the lump sum;
  - (b) where the Principal accepted rates, the amount calculated by firstly multiplying the rates by their respective quantities in the schedule of rates and then adding those products;
- but excluding any additions or deductions which are made under the Contract.
- 1.6** day means calendar day.
- 1.7** Site means the lands and other places made available to the Contractor by the Principal for the purpose of the Contract.
- 1.8** Text within the following format denotes a definition:



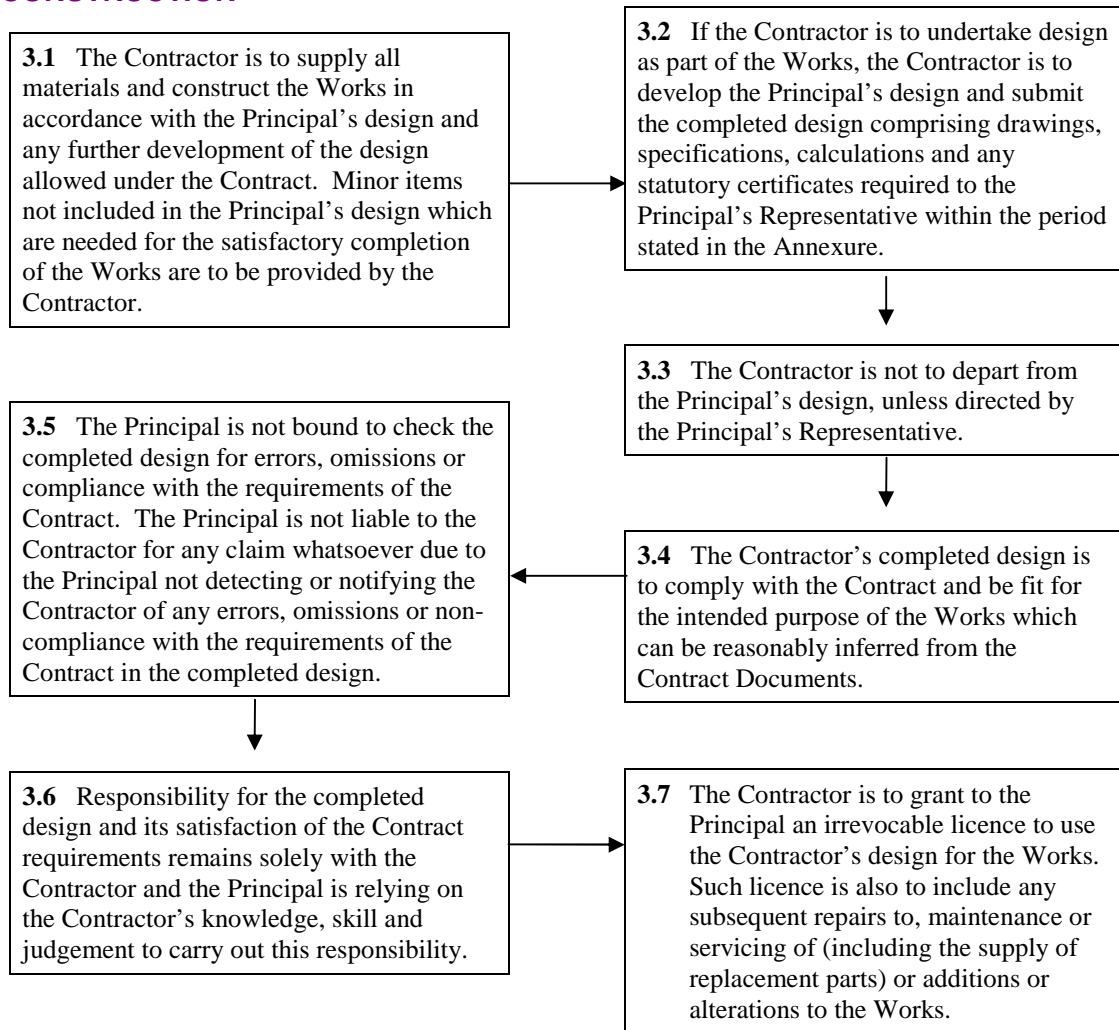
### 2 CONTRACT

**2.1** The written agreement between the Principal and the Contractor for the performance of the Works, including all documents and parts of documents to which reference may properly be made to determine the rights and obligations of the parties (the Contract Documents) shall evidence the Contract.

**2.2** The Contract Documents shall be taken as mutually explanatory and anything contained in one but not in another shall be treated as if contained in all.

**2.3** If the Contractor finds any discrepancy, error or ambiguity in or between the Contract Documents, the Contractor is to inform the Principal's Representative before starting such work and follow the directions given by the Principal's Representative.

### 3 DESIGN AND CONSTRUCTION



#### 4. CARE OF THE WORKS AND OTHER PROPERTY

**4.1** From and including the date the Site is made available to the Contractor to the date of Completion of the Works, the Contractor is responsible for the care of the Works, constructional plant and things entrusted to the Contractor by the Principal for the purpose of the Works.

The Contractor is to make good at the Contractor's expense any damage which occurs to the Works while responsible for their care.

The Contractor is also liable for damage caused by the Contractor during the Defects Liability Period.

**4.2** The Contractor is to indemnify and keep the Principal indemnified against any loss or damage to the property of the Principal (including existing property in, about or adjacent to the Works) and against any legal liability for injury, death or damage to property of others arising from the performance of the Works.

**4.3** Nothing in Clause 4 relieves the Principal from liability for the Principal's own default and defaults of others for whom the Principal is liable.

**5. INSURANCE**

**5.1** On acceptance of the tender, the Contractor is to hold or take out an insurance policy covering Workers Compensation in the State of NSW and shall also ensure that every subcontractor, who is not taken to be a worker employed by the Contractor in accordance with the *Workplace Injury Management and Workers Compensation 1998* (NSW) Schedule 1, must hold or take out insurance covering Workers Compensation.

If insurance of the Works and public liability is to be arranged by:  
the Principal, go to **5.2**  
the Contractor, go to **5.3**

**5.2** If insurance of the Works and public liability is to be arranged by the Principal (see the Annexure) the Principal must effect insurance of the Works and public liability.

The Principal must make a copy of the policy for insurance of the Works and public liability available to the Contractor.

Go to **5.4**

**5.3** If insurance of the Works and public liability is to be arranged by the Contractor, (see the Annexure) then, before commencing work on the Site, the Contractor is to hold or take out policies of insurance covering the Contractor, Principal and subcontractors for:

(a) public liability to an amount of not less than \$5,000,000 for any single occurrence; and

(b) loss or damage to the Works, any temporary works and all materials, constructional plant and other things that are brought onto the Site by or on behalf of the Contractor or are entrusted to the Contractor by the Principal. The amount insured is not to be less than the Contract Sum.

The Principal is to be named as an insured in the policies.

The policies must include cross liability and waiver of subrogation clauses under which the insurer, in respect of liability, agrees that the term 'insured' applies to each of the persons covered as if a separate insurance policy had been issued to each of them and generally agrees to waive all rights of subrogation or action against any of the persons covered.

Go to **5.4**

**5.4** If the Works include work described in (a) or (b) below, the Contractor is to take out the following additional insurance policies before starting such work:

- (a) For the use of water-borne craft in excess of 8 metres in length: marine liability insurance;
- (b) For design of the Works undertaken by the Contractor: professional indemnity insurance.

The policy under (a) is to be in the name of the Contractor with the Principal as an additional name insured and is to cover the Contractor, the Principal, and all subcontractors employed from time to time in relation to the Works for their respective rights and interests and cover their liabilities to third parties. The policy is to be for an amount not less than \$5,000,000 for any one occurrence and shall include cross-liability and waiver of subrogation clauses under which the insurer, in respect of liability, agrees that the term 'insured' applies to each of the persons covered as if a separate insurance policy had been issued to each of them and generally agrees to waive all rights of subrogation or action against any of the persons covered.

The policy under (b) is to cover the Contractor for liability to the Principal for a minimum amount of \$500,000 or 20% of the Contract Sum, whichever is greater, to a maximum of \$5,000,000 for loss (whether economic loss only or other loss) in a single occurrence arising from errors or omissions in design of the Works carried out by the Contractor or any subcontractor.

Go to **5.5**

↓

**5.5** The required policies are to be with insurers and in terms approved by the Principal's Representative. Approvals will not be withheld unreasonably.

↓

**5.6** The Contractor is responsible for making and managing claims and meeting the costs of any deductibles.

↓

**5.7** The Contractor is to maintain all required insurance policies until the end of the Defects Liability Period, or Completion if there is no Defects Liability Period.

↓

**5.8** If, when required in writing by the Principal to do so, the Contractor fails to produce evidence of having paid insurance premiums and other compliance with insurance obligations under General Conditions of Contract Clause 5, to the satisfaction of the Principal, the Principal may effect or maintain the insurance and pay any premiums. The Contractor is to pay the Principal the amount of any premiums paid by the Principal plus an amount of \$250 to cover the Principal's costs.

## 6. SITE AND POSSESSION

**6.1** The Principal is to give the Contractor possession of the Site by the time stated in the Annexure.



**6.2** The Principal is to give the Contractor sufficient possession to allow the Contractor to perform the Works but is not required to give the Contractor sole or uninterrupted possession of or access to the Site.



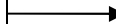
**6.3** The Contractor is to begin work on the Site as soon as practicable after being given possession of the Site by the Principal.



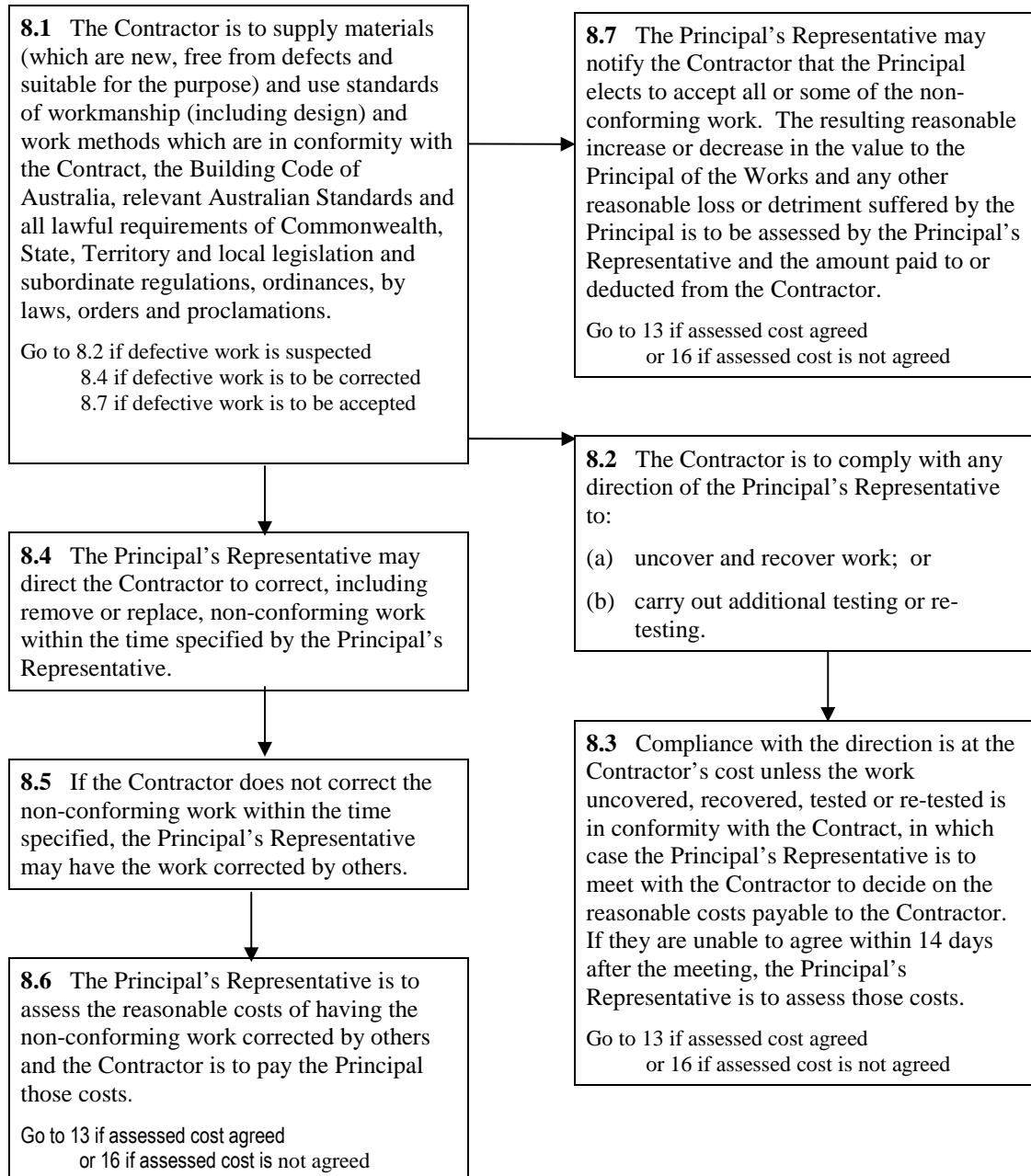
**6.4** The Contractor is to give the Principal's Representative, agents and contractors reasonable access to the Site for any purpose.

## 7. SITE CONDITIONS

**7.1** If the Contractor discovers that the conditions on, about or below the Site differ from what ought to have reasonably been anticipated at Tender time the Contractor is to inform the Principal's Representative immediately and, where possible, before the conditions are disturbed.



**7.2** The Contractor is not entitled to any extra payment for the different Site conditions. If the different conditions are such that the Principal's Representative directs the Contractor to carry out a variation, the procedure in Clause 9 is then to be followed.

**8. NON-CONFORMING WORK**

**9. VARIATIONS**

**9.1** The Principal's Representative may direct the Contractor to carry out a variation and the Contractor is to carry out the direction.

**9.3** A variation is any change to the character, form, quality and extent of the Works directed in writing by the Principal's Representative. A variation shall not invalidate the Contract.

**9.2** The Principal's Representative and Contractor are to meet to agree on the reasonable amount payable to or deducted from the Contractor for the variation. If they do not agree within 14 days after the meeting, the Principal's Representative is to assess that amount.

Go to 13 if assessed amount agreed  
or 16 if assessed amount is not agreed

**10. SUSPENSION**

**10.1** The Principal's Representative may direct the Contractor to suspend all or part of the Works and the Contractor is to carry out the direction.

**10.2** If the direction to suspend the work is due to any act or omission of the Principal, the Principal's Representative and Contractor are to meet to agree on the reasonable extra costs payable to the Contractor which resulted from the suspension. If they do not agree within 14 days after the meeting, the Principal's Representative is to assess those extra costs.

Go to 13 if assessed cost agreed  
or 16 if assessed cost is not agreed

**10.3** The Contractor is to recommence the Works as soon as practicable after being directed to do so by the Principal's Representative.

## 11. COMPLETION OF THE WORKS

**11.1** The Contractor is to Complete the Works within the period stated in the Annexure which starts on the date of being given possession of the Site.

**11.2** The Contractor is to inform the Principal's Representative when, in the Contractor's opinion the Works have reached Completion.

**11.4** The Works have reached Completion and are Complete when the Works are capable of use for their intended purpose, and should be free from any omissions or defects, and the Contractor has made good the Site and its surroundings.

**11.3** The Principal's Representative is to:

- (a) determine if the Works have reached Completion, and if so, the date of Completion; and
- (b) give the Contractor written notice of the determination.

## 12. DELAY IN COMPLETION

**12.1** If the Contractor is delayed in reaching Completion then the Contractor is to notify the Principal's Representative within 14 days after the commencement of the delay and to meet with the Principal's Representative to determine the cause of delay. Where such a delay is caused by:

- (a) a direction given by the Principal's Representative except under:
  - Clause 8; or
  - Clause 10 where the event giving rise to the direction was not beyond the control of the Contractor; or
- (b) a breach of the Contract by the Principal; or
- (c) any event beyond the control of the Contractor,

the period for Completion is to be extended.

**12.2** If the Principal's Representative and the Contractor do not agree on an extension to the period for Completion within 14 days of the meeting to determine the cause of delay, the Principal's Representative is to assess a reasonable extension of time. The Principal's Representative may for any reason and at any time extend the period for Completion.

Go to 16 if assessed extension of time is not agreed.

**12.3** If the Contractor does not Complete the Works by the last day of the period for Completion then the Contractor is to pay to the Principal liquidated damages from, but excluding that date, to and including the date the Works are Complete at the rate stated in the Annexure.

### 13. PAYMENT AND RETENTION

**13.1** *If the Contract has substantial Demolition and the 'Amount of Security' in the Annexure is >\$0:*

Before commencing any work on the Site, the Contractor is to provide security in the amount stated in the Annexure and in the form as detailed in Schedule - Unconditional Undertaking.

**13.2** *If the Contract requires the Contractor to pay the Contract Sum to the Principal:*

Before commencing any work on the Site, the Contractor is to pay the Principal the Contract Sum.

**13.3** *If the Contract requires the Principal to pay the Contract Sum to the Contractor:*

The Contractor is to give the Principal's Representative a written claim for payment when a Milestone stated in the Annexure is reached. The claim is to identify the Milestone, the amount claimed, how the amount is calculated, deductions to which the Principal is entitled and, when additions are claimed, the legal and factual basis of the claim. Additions are extra costs or other amounts to which the Contractor is entitled under or in connection with the subject matter of the Contract.

When a Milestone is reached the amount which the Contractor is entitled to claim, and be paid, is the sum of:

- for work for which the Principal accepted rates, an amount calculated by applying the rates to the quantities of work carried out to that date;
- for work for which the Principal accepted a lump sum, the percentage stated in the Annexure for the Milestone;
- for any additions for which the Principal has approved an amount in writing or for which an amount has been finally determined by an Expert under Clause 16, the amount approved or determined;

less payments previously made (including under Clause 16), costs payable by the Contractor to the Principal and deductions to which the Principal is entitled under or in connection with the subject matter of the Contract, including but not limited to retention moneys, liquidated damages and other damages whether liquidated or unliquidated.

With each claim for payment, and at any other time as requested by the Principal's Representative, the Contractor is to give the Principal's Representative a completed statutory declaration, as detailed in Schedule - Statutory Declaration.

Within 10 business days after receipt of the Contractor's payment claim, the Principal is to provide to the Contractor a payment schedule identifying the progress claim to which it relates and stating the payment, if any, which the Principal will be making. If the payment is to be less than the amount claimed by the Contractor the payment schedule is to indicate why it is less. For the purposes of this clause a business day is any day other than a Saturday, Sunday, public holiday or 27, 28, 29, 30 or 31 December.

**13.3 (Continued)**

Payment is to be made:

- within 20 business days after receipt of the Contractor's written payment claim; or
- within 5 business days after the statutory declaration is received; or
- by the specified time after any action required prior to payment has been carried out,

whichever is the latest. If the Contractor breaches the requirement to submit a completed statutory declaration the Principal is not obliged to make any payment to the Contractor while the breach continues.

Any claim by the Contractor on the Principal is to be made within 28 days after the date of the Principal's Representative's written notice of Completion under Clause 11.3. All claims whatsoever by the Contractor against the Principal made after that time are barred. However, if the contract includes a Defects Liability Period, and the Contractor has a claim against the Principal under Clause 14.4 or because of an event which occurred during the Defects Liability Period, the Contractor may make that claim up to 28 days after the end of the Defects Liability Period. If the claim is made after that time it is barred.

Unless stated otherwise, all payments by the Principal to the Contractor are to be made by Electronic Funds Transfer to a bank, building society or credit union account nominated by the Contractor. No payment is due to the Contractor until details of the nominated account (name of financial institution, account name and account number) are notified in writing to the Principal's Representative. The Contractor is to promptly notify the Principal's Representative in writing of any changes to the nominated account and the Principal is not responsible for any payments made into a previously nominated account before notification of such change is received by the Principal's Representative.

Payment is not evidence of the value of work or an admission of liability or that the work is satisfactory but is a payment on account only.

**13.4** *When the Works are Complete and the Contract requires Security:*

When the Contractor has provided an Unconditional Undertaking for Security (Annexure 13.1) the Principal is to return the Unconditional Undertaking, less any amounts the Contractor is to pay the Principal, within 14 days of Completion.

**13.5** *When the Works are Complete and the Contract has a Defects Liability Period:*

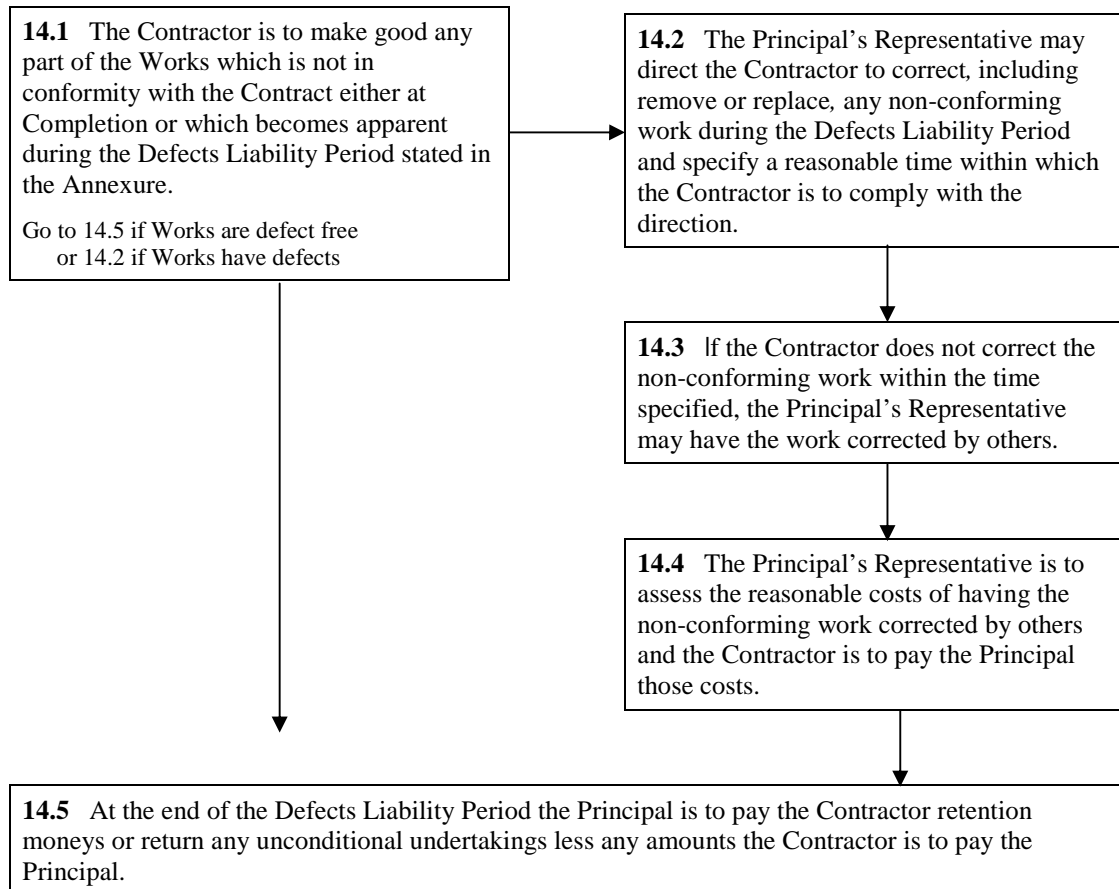
An amount of 2.5% of the Contract Sum is to be retained by the Principal against the due and proper performance of the Contract, except when there is no Defects Liability Period.

The Contractor may, instead of the retention, provide security in the amount of the retention in the form as detailed in Schedule – Unconditional Undertaking.

**13.6** *If an Unconditional Undertaking is required:*

All Undertakings must be provided by a financial institution acceptable to the Principal.

## 14. DEFECTS LIABILITY PERIOD



**15. DEFAULT AND INSOLVENCY**

**15.1** Without prejudice to any other rights which the Principal has, if the Contractor commits a substantial breach of the Contract, including:

- (a) failing to carry out a direction of the Principal's Representative within the time specified or if no time is specified, within a reasonable time;
- (b) not progressing Works at a reasonable rate,

the Principal may, in writing, specify the breach and ask the Contractor to give reasons why the Principal should not take further action.

**15.2** If the Contractor is wound up or declared insolvent then:

**15.4**

- (a) The Principal may immediately take over the uncompleted Works by notice in writing; and
- (b) suspend payments due or which would become due under Clause 13; and
- (c) have the Works Completed by others.

**15.3** If the Contractor either fails to give a written response within 7 days of receiving the Principal's notice, or fails to give reasons satisfactory to the Principal, then:

Go to 15.5 for Termination option  
or 15.4 for Takeover option

**15.5** The Principal, may immediately terminate the Contract by notice in writing to the Contractor, in which case the respective rights and liabilities of the parties shall be the same as they would be at common law if the Contractor had wrongfully repudiated the Contract.

**15.7** If the calculation results in a shortfall to the Principal, the Contractor is to pay the amount of the shortfall to the Principal within seven days of a written demand for payment.

**15.6** The Principal's Representative is to calculate the difference between:

- (a) the costs of having the Works Completed by others; and
- (b) the amount of suspended payments and retention moneys held by the Principal.

Go to 15.7 Contractor to pay  
or 15.8 Principal to pay

**15.8** If the calculation results in an excess to the Principal, the Principal is to pay the amount of the excess to the Contractor.

**16. DISPUTES**

**16.1** If either party is dissatisfied with an act or omission of the other party in connection with the Contract, including assessment of a claim, failure to agree, or an instruction, that party is to notify the Principal's Agent and the other party in writing of a dispute within 14 days of the act or omission. The notifying party is to provide particulars, including the factual and legal basis of any claimed entitlement.

If a party gives notice of a dispute but not within the time provided by this Clause 16.1, then it is not entitled to interest for the period before the party gave notice.

**16.2** Within 7 days of the giving of the notice, the Contractor and Principal's Agent are to meet to attempt to resolve the dispute.

**16.3** If the dispute is not resolved within 14 days after the notice providing particulars of the dispute, the parties are to appoint an independent Expert.

If the parties fail to agree upon an Expert, either may request the Chief Executive Officer of the Australian Commercial Disputes Centre Ltd Sydney to nominate an Expert. If there is no Chief Executive Officer or the Chief Executive Officer fails to make a nomination within a reasonable time, the Principal is to nominate an Expert.

**16.4** The person nominating the Expert is not to nominate:

- an employee of the Principal or Contractor,
- a person who has been connected with the Contract, or
- a person upon whose appointment the Principal and the Contractor have previously failed to agree.

**16.5** When the person to be the Expert has been agreed on or nominated, the Principal, on behalf of both parties is to appoint the expert in writing, with a copy to the Contractor, setting out:

- the dispute being referred to the Expert for a decision,
- the Expert's fees,
- the procedures detailed in this Clause 16, and
- any other matters which are relevant to the engagement.

**16.6** The Principal and the Contractor are to share equally the Expert's fees and out-of-pocket expenses, including security deposit if required. Each party is to otherwise bear their own costs and share equally any other costs of the process.



**16.7** Each party is to make written submissions to the Expert and provide a copy to the other party as follows:

- (a) Within 7 days after the appointment of the Expert, the notifying party is to submit details of the claimed act or omission.
- (b) Within 14 days after receiving a copy of that submission, the other party is to submit a written response. That response can include cross-claims.

**16.8** The Expert is to decide whether the claimed event, act or omission did occur and, if so:

- when it occurred,
- what term of the Contract or other obligation in law, if any, requires the other party to pay the claimant money in respect of it, and
- the merits in law of any defence or cross-claim raised by the other party.

The Expert then decides the amount, if any, which one party is legally bound to pay the other on account of the event, act or omission.

The Expert is also to decide any other questions required by the parties, as set out in the dispute referred to the Expert at Clause 16.5.

**16.9** In making the decision, the Expert acts as an expert and not as an arbitrator and is:

- (a) not liable for acts, omissions or negligence;
- (b) to make the decision on the basis of the written submissions from the parties and without formalities such as a hearing;
- (c) required within 35 days of appointment to give the decision in writing, with brief reasons, to each party; and
- (d) bound by the rules of natural justice.

**16.10** If the Expert decides that one party is to pay the other an amount exceeding \$250,000 (calculating the amount without including interest on it), and within 14 days of receiving the decision of the Expert, either party gives notice in writing to the other that the party is dissatisfied, the decision is of no effect and either party may then commence litigation.

**16.11** Unless a party has a right to commence litigation under Clause 16.10:

- (a) The parties are to treat each determination of the Expert as final and binding and give effect to it.
- (b) If the Expert decides that one party owes the other party money, that party is to pay the money within 14 days of the receiving the decision of the Expert.

## 17. TERMINATION FOR THE PRINCIPAL'S CONVENIENCE

**17.1** The Principal may terminate the Contract by giving notice with effect from the date stated in the notice, for its convenience and without the need to give reasons. The Contractor must leave the Site by the date stated in the termination notice and remove all plant, equipment and amenities it has brought onto the Site for the construction of the Works.

If the Contract is terminated for the Principal's convenience, the Principal must pay the Contractor:

- the value of all work carried out (as determined in clause 13) up to the date of the termination notice takes effect; plus
- 2% of the difference between the Contract Sum, adjusted by any amounts agreed or assessed under clause 9.2 or finally determined under clause 16, and the total of all amounts paid and payable to the contractor for payment claims.

The payments referred to in this Clause are full compensation under this Clause, and the Contractor has no claim for damages or other entitlement whether under the Contract or otherwise.

The Contractor must, wherever possible, include in all subcontracts and supply agreements an equivalent provision to this Clause.

## SCHEDULE 1

### APPROVED FORM OF UNCONDITIONAL UNDERTAKING

*[To be submitted on a Financial Institution's letterhead and show, at a minimum, the Financial Institution's name and address]*

At the request of ..... ('the Contractor')  
and in consideration of ..... ('the Principal')  
accepting this undertaking in respect of the contract for  
..... ('the Contract'),  
..... ('the Financial Institution')  
unconditionally undertakes to pay on demand any sum or sums which may from time to time be  
demanded by the Principal to a maximum aggregate sum of  
.....(\$.....)('the Sum').

*The undertaking is to continue until notification has been received from the Principal that the Sum is no longer required by the Principal or until this undertaking is returned to the Financial Institution or until payment to the Principal by the Financial Institution of the Sum or such part as the Principal may require. The Principal must not assign the unconditional undertaking without the prior **written** agreement of the Financial Institution, which must not be unreasonably withheld.*

*Should the Financial Institution be notified in writing, purporting to be signed by or for and on behalf of the Principal that the Principal requires payment to be made of the whole or any part or parts of the Sum, it is unconditionally agreed that the Financial Institution will make the payment or payments to the Principal forthwith without reference to the Contractor and notwithstanding any notice given by the Contractor not to pay same.*

*Provided always that the Financial Institution may at any time without being required so to do pay to the Principal the Sum less any amount or amounts it may previously have paid under this undertaking or such lesser sum as may be required and specified by the Principal and thereupon the liability of the Financial Institution hereunder shall immediately cease.*

DATED at ..... this ..... day  
of ..... 20 .....

.....  
[Signature]

.....  
[Print name of person signing the Undertaking]

.....  
[Position / Title]

**SCHEDULE 2****Statutory Declaration****Definitions***Oaths Act 1900*  
(NSW)

*The Principal is* .....

*The Contractor is* .....

ACN/ABN.....

*The Contract is* Contract No. ....

Contract Title.....

dated .....(Date of Contract) between the party identified as the Principal and the party identified as the Contractor.

**Declaration**

*Full name* **I,** .....

*Address* of .....  
.....

do hereby solemnly declare and affirm that:

*Insert position title of the Declarant* **1** I am the representative of the Contractor in the Office Bearer capacity of  
.....

**2** I am in a position to make this statutory declaration about the facts attested to.

**REMUNERATION OF CONTRACTOR'S EMPLOYEES ENGAGED TO CARRY OUT WORK IN CONNECTION WITH THE CONTRACT**

- 3** All remuneration payable to the Contractor's relevant employees for work done in connection with the Contract to the date of this statutory declaration has been paid and the Contractor has made provision for all other benefits accrued in respect of the employees.
- Relevant employees are those engaged in carrying out the work done in connection with the Contract.

Remuneration means remuneration or other amounts payable to relevant employees by legislation, or under an industrial instrument, in connection with work done by the employees [s127(6) of the *Industrial Relations Act 1996* (NSW)].

**REMUNERATION OF THE EMPLOYEES OF SUBCONTRACTORS ENGAGED TO CARRY OUT WORK IN CONNECTION WITH THE CONTRACT**

- 4** The Contractor *is/is not* a principal contractor for the work done in connection with the Contract, as defined in section 127 of the *Industrial Relations Act 1996* (NSW).
- 5** Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement in its capacity of principal contractor under section 127(2) of the *Industrial Relations Act 1996* (NSW) by each subcontractor in connection with that work stating that all remuneration payable by each subcontractor to the subcontractor's relevant employees for work done in connection with the Contract to the date of this declaration has been paid, and each subcontractor has made provision for all other benefits accrued in respect of each subcontractor's employees.
- 6** I am aware that the *Industrial Relations Act 1996* (NSW) requires any written statement provided by subcontractors must be retained for at least 6 years after it was given and declare that the Contractor has accordingly made arrangements for

Delete the words  
*in italics* that are  
not applicable.

the secure retention of the written statements.

**WORKERS COMPENSATION INSURANCE OF THE CONTRACTOR'S WORKERS**

- 7 All workers compensation insurance premiums payable by the Contractor to the date of this statutory declaration in respect of the work done in connection with the Contract have been paid. This statutory declaration is accompanied by a copy of any relevant certificate of currency in respect of that insurance.

**WORKERS COMPENSATION INSURANCE FOR WORKERS OF SUBCONTRACTORS**

- 8 The Contractor *is / is not* a principal contractor for work done in connection with the Contract, as defined in section 175B of the *Workers Compensation Act 1987* (NSW).
- 9 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement under section 175B of the *Workers Compensation Act 1987* (NSW) in the capacity of principal contractor in connection with that work to the intent that all workers compensation insurance premiums payable by each subcontractor in respect of that work done to the date of this statutory declaration have been paid, accompanied by a copy of any relevant certificate of currency in respect of that insurance.
- 10 I am aware that the *Workers Compensation Act 1987* (NSW) requires any written statement provided by subcontractors and any related certificate of currency must be retained for at least 7 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

Delete the words *in italics* that are not applicable.

**EMPLOYER UNDER THE PAYROLL TAX ACT**

- 11 The Contractor *is registered as / is not required to be registered as* an employer under the *Payroll Tax Act 2007* (NSW).
- 12 All payroll tax payable by the Contractor in respect of wages paid or payable to the relevant employees for work done in connection with the Contract to the date of this statutory declaration has been paid.
- 13 The Contractor *is / is not* a principal contractor for work done in connection with the Contract, as defined in section 17 of Schedule 2 to the *Payroll Tax Act 2007* (NSW).
- 14 Where the Contractor is also a principal contractor for work done in connection with the Contract, the Contractor has been given a written statement under section 18 of Schedule 2 to the *Payroll Tax Act 2007* (NSW) in the capacity of principal contractor in connection with that work to the intent that all payroll tax payable by each subcontractor in respect of the wages paid or payable to the relevant employees for that work done to the date of this statutory declaration has been paid.
- 15 I am aware that the *Payroll Tax Act 2007* (NSW) requires any written statement provided by subcontractors must be retained for at least 5 years after it was given and declare that the Contractor has accordingly made arrangements for the secure retention of the written statements.

Delete the words *in italics* that are not applicable.

Delete the words *in italics* that are not applicable.

**PAYMENTS TO SUBCONTRACTORS**

- 16 The Contractor has paid every subcontractor, supplier and consultant all amounts payable to each of them by the Contractor as at the date of this statutory declaration with respect to engagement of each of them for the performance of work or the supply of materials for or in connection with the Contract.
- 17 The provisions of clause "SECURITY OF PAYMENT", if included in the Contract, have been complied with by the Contractor.
- 18 The Contractor has been informed by each subcontractor and consultant to the Contractor (except for subcontracts and agreements not exceeding \$25,000 at their commencement) by written statement in equivalent terms to this declaration (made no earlier than the date 14 days before the date of this declaration):
- .1 that their subcontracts with their subcontractors, consultants and suppliers

## 1. GENERAL CONDITIONS OF CONTRACT AND ANNEXURE

comply with the requirements of clause "SECURITY OF PAYMENT", if included in the Contract, as they apply to them; and

.2 that all of their employees, subcontractors, consultants and suppliers, as at the date of the making of such a statement have been paid all remuneration and benefits due and payable to them by, and had accrued to their account all benefits to which they are entitled from, the subcontractor or consultant of the Contractor or from any other of their subcontractors or consultants (except for their subcontracts and agreements not exceeding \$25,000 at their commencement) in respect of any work for or in connection with the Contract.

19 I am not aware of anything to the contrary of any statutory declaration referred to in paragraph 18 of this declaration and on the basis of the statements provided, I believe the matters set out in paragraph 18 to be true.

20 And I make this solemn declaration, as to the matters aforesaid, according to the law in this behalf made, and subject to the punishment by law provided for any wilfully false statement in any such declaration.

Signature of  
Declarant

.....  
declared at

Place

.....

Date

on.....  
before me

Signature of legally  
authorised person\*  
before whom the  
declaration is made

.....

Name and title of  
person\* before  
whom the declaration  
is made

.....  
.....

### Notes:

1. In this declaration:

- (a) the words "principal contractor", "employee", "employees" and "relevant employees" have the meanings applicable under the relevant Acts;
- (b) the word "subcontractor" in paragraphs 5, 6, 9, 10, 14 and 15 has the meaning applicable under the relevant Act; and
- (c) otherwise the words "Contractor", "subcontractor", "supplier" and "consultant" have the meanings given in or applicable under the Contract.

2. \* The declaration must be made before one of the following persons:

(a) where the declaration is sworn within the State of New South Wales:

- (i) a justice of the peace of the State of New South Wales;
- (ii) a solicitor of the Supreme Court of New South Wales with a current practising certificate;
- (iii) a notary public; or
- (iv) another prescribed person legally authorised to administer an oath under the *Oaths Act 1900* (NSW);

or

(b) where the declaration is sworn in a place outside the State of New South Wales:

- (i) a notary public; or
- (ii) any person having authority to administer an oath in that place.

## ANNEXURE TO GENERAL CONDITIONS OF CONTRACT - MINOR WORKS

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### Clause

#### 1.1

The Principal is the Minister for Commerce for the State of NSW.

#### Notices and Submissions to the Principal

Notices and Submissions to the Principal must go to the Principal's Representative.

#### 1.2

The Principal's Representative is : Roy Craddock

and is located at:

Level 18, McKell Building  
2-24 Rawson Place  
Sydney NSW 2000  
Ph: (02) 9372 8213  
Fax: (02) 9372 8222

If no name is stated the Principal is to name the person in writing within 7 days after accepting the tender. The Principal may at any time change the person for any reason whatsoever by giving written notice.

#### 1.3

The Principal's Agent is : »

and is located at: »

If no name is stated the Principal is to name the person in writing within 2 days of the Contractor giving written notice of a dispute under Clause 16. The Principal may at any time change the person for any reason whatsoever by giving written notice.

#### 3.2

The period to submit the completed design is N/A before its use for construction.

If no period is stated it is 7 days before its use for construction.

#### 5.2

The Principal has arranged insurance of the Works and public liability through insurance broker Jardine Lloyd Thompson Pty Ltd.

The insurance policy is available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_contract\\_management\\_insurance\\_policies.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_contract_management_insurance_policies.doc)

#### 6.1

The time to give possession of Site is: 7 days after the Principal accepted the tender.

If no time is stated it is 7 days after the Principal accepted the tender.

#### 11.1

The period for Completion is: 13 calendar weeks.

If no period is stated a reasonable period is to apply.

**12.3**

The rate per day of liquidated damages is: \$780.00

If no rate is stated common law damages are to apply.

**13.1**

The amount of Security is: » \$ .....

If no amount is stated then no Security applies.

**13.3**

The Milestones and Percentages are as below:

Milestone:	Percentage:
Orders placed and Goods received for replacement luminaires, ballasts, lamps & lampholders (supporting paperwork required)	25%
Completion of Works at 50% of the total number of schools	35%
Completion of Works at all schools	40%

If no Milestones and Percentages are stated the Milestone is Completion of the Works and Percentage is 100%.

**14.1**

The Defects Liability Period, which commences at Completion of the Works is: 52 calendar weeks

If no Period is stated then no Defects Liability Period applies.

**END OF SECTION – GENERAL CONDITIONS OF CONTRACT AND ANNEXURE**

## 2 PRELIMINARIES

*THERE ARE 25 PAGES IN THIS SECTION*

### 1 ADMINISTRATION AND CONTRACTING

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#### 1.1 ELECTRONIC COMMUNICATIONS

The parties agree and consent that notices and communications may be by electronic communication in accordance with the *Electronic Transactions Act 2000* (NSW).

#### 1.2 USE OF QUALIFIED TRADEPERSONS

Use qualified tradepersons when completing the Works. The use of such persons shall not relieve the Contractor of liability for the fitness of the Works for the purposes required by the Contract.

#### 1.3 LONG SERVICE LEVY

Before commencing the works, the Contractor must:

- pay to the Building and Construction Industry Long Service Payments Corporation or the Corporation's agent the amount of the long service levy payable under the *Building and Construction Industry Long Service Payments Act 1986* (NSW); and
- produce to the Principal the document evidencing payment of the levy.

Additional information and the Levy Payment Form are available on the Internet at:

[www.lspc.nsw.gov.au](http://www.lspc.nsw.gov.au)

#### 1.4 COLLUSIVE ARRANGEMENTS

The Contractor must comply with the NSW Government *Code of Practice for Procurement*, which is available on the Internet at:

[www.treasury.nsw.gov.au/procurement/cpfp\\_ig](http://www.treasury.nsw.gov.au/procurement/cpfp_ig)

#### 1.5 CONTRACTOR PERFORMANCE REPORTING

During the course of the Contract, the Contractor's performance may be monitored and assessed in accordance with the *Performance management system guidelines* which are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_performance\\_management.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_performance_management.doc)

#### 1.6 EXCHANGE OF INFORMATION BETWEEN GOVERNMENT AGENCIES

The Contractor authorises the Principal and its employees and agents to make information concerning the Contractor and its performance available to other NSW government agencies and local government authorities, which may take such information into account in considering whether to offer the Contractor future opportunities for work.

The Principal regards the provision of information about the Contractor to any NSW government agency or local government authority as privileged under the *Defamation Act*

2005. The Contractor agrees that it will have no entitlement to make any claim against the Principal in respect of any matter arising out of the provision or receipt of such information.

### 1.7 NATSPEC SUBSCRIPTION

If any of the Contractor's Documents are based on NATSPEC, then the Contractor must provide to the Principal proof of the Contractor's current NATSPEC subscription.

### 1.8 GOODS AND SERVICES TAX

All prices, rates and other amounts referred to under the Contract must include GST if it is payable.

The Principal will issue payment schedules in the form of Recipient Created Tax Invoices. The Contractor must not issue Tax Invoices in respect of the Contract.

The Principal will issue Adjustment Notes in respect of adjustment events known to the Principal. The Contractor must notify the Principal of details of any adjustment event not known to the Principal.

Each party warrants it is registered for GST at the time of entering into the Contract, and must notify the other party if it ceases to be registered for GST or to satisfy any requirements for the issue of Recipient Created Tax Invoices.

### 1.9 PASSING OF PROPERTY AND RISK

Unless otherwise provided, items supplied by the Contractor become the property of the Principal when unloaded as required in the Contract. Such items remain at the risk of the Contractor until property therein passes to the Principal.

### 1.10 PAYMENT CLAIMS FOR LUMP SUM ITEMS

A claim for payment of any proportion of a lump sum, including any lump sum in a *Schedule of Rates* or *Schedule of Prices*, must be expressed as a percentage.

### 1.11 QUALITY MANAGEMENT REQUIREMENTS

#### Design Plan

Prior to commencing design work, prepare and implement a Design Plan complying with the NSW Government *Quality Management Systems Guidelines (QMS Guidelines)*, covering each phase of design and addressing the key activities.

The *QMS Guidelines* are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

#### Inspection and Test Plans

Prepare and implement Inspection and Test Plans, complying with the *QMS Guidelines*, incorporating the Hold and Witness points specified in the Contract.

Submit copies of Inspection and Test Plans and checklists not less than 7 days before commencing the work to which they apply. Also submit certification that the relevant Inspection and Test Plans of Subcontractors and Consultants meet the requirements of the *QMS Guidelines*. Do not start any work before this documentation is submitted.

Give at least 24 hours notice prior to reaching a Hold or Witness point.

The Contractor must not proceed beyond a Hold point without endorsement by the Principal or its authorised representative.

The Principal, at its discretion, may inspect the work at a Witness point, but work may proceed without endorsement.

Endorsement by the Principal at a Hold or Witness point does not release the Contractor from its obligations to achieve the specified requirements of the Contract.

Surveillance (monitoring) by the Principal will apply to all work associated with the Contract.

### Conformance records

Submit copies of conformance records as specified, including:

Conformance records	Time when records are required
All Workers on all Sites have completed the Prohibited Employment Declaration	With each Payment Claim for site works
Completed Inspection & Test Plans and associated checklists	With each Payment Claim for site works
All replaced, repaired and upgraded lamps are in operation at all schools	At completion
Waste management reports	At completion

### Failure to Comply

If the Contractor fails to comply with the requirements of this clause, the Principal may implement such inspections and tests as the Principal determines and the cost incurred by the Principal shall be a debt due from the Contractor.

## 1.12 SECURITY OF PAYMENT

### General

In this clause “subcontract” includes an agreement for supply of goods or services (including professional services and plant hire) or both and “subcontractor” includes a supplier of goods or services (including professional services and plant hire) or both.

The Contractor shall ensure that each subcontract, whether written or oral, entered into by the Contractor or any subcontractor in respect of the work under the Contract and which has a value of \$25,000 or more at the commencement of the subcontract, includes provisions in the form or to the effect of the form, as the case may be, of those contained in this clause, including the provisions of this subclause.

### Options as to Form of Security

Each subcontract which -

- requires the subcontractor to provide a cash security to its principal;
- allows the subcontractor’s principal to deduct retention moneys from any payment made by it to the subcontractor; or
- provides for both of the above

shall allow the subcontractor the option at any time to provide an unconditional undertaking or unconditional undertakings in lieu of a cash security or retention moneys. To the extent that the subcontractor provides an unconditional undertaking or undertakings, the subcontractor’s principal shall not deduct retention moneys and shall forthwith release to the subcontractor any retention moneys or cash security then held.

### Trust for Cash Security and Retention Moneys

Each subcontract shall include a provision having the effect that:

- When a party receives or retains security in cash or converts security to cash, that security is held in trust by the security holder from the time of receipt, retention or conversion, as the case may be, and the security holder must forthwith deposit the money into a trust account in a bank selected by that party;
- the moneys shall be held in trust for whichever party is entitled to receive them until they are paid in favour of that party and the security holder shall maintain proper records to account for such moneys; and
- any interest earned by the trust account shall not be held in trust, and shall be owned by the party holding the security.

If the party holding security has a policy of insurance protecting subcontract payments due to the other party which is equivalent to the HIA Security of Payment Bond, then compliance with the above of this subclause is not required.

Whenever requested by the Principal to provide evidence verifying that the Contractor is holding in trust an amount which the Contractor should be holding in trust, the Contractor shall provide evidence to the reasonable satisfaction of the Principal that the amount is held in trust. If the Contractor fails to do so then, in addition to any other remedy which the Principal may have against the Contractor, the Principal may withhold an equivalent amount from payments to the Contractor.

### Payments

Each subcontract shall include:

- an obligation, which takes precedence over any inconsistent provision of the subcontract, for the subcontractor's principal to pay the subcontractor regular progress payments of 100% of the value of work, goods or services provided by the subcontractor less only retention moneys, if any, paid into the trust account referred to in subclause - **Trust for cash security and retention moneys**;
- an entitlement to progress payments within the following periods after the date upon which a progress claim is lodged by the Contractor with the Principal's Representative:
  - in the case of the Contractor's subcontractors, 28 days;
  - in the case of all other subcontractors, 35 days,

Compliance with this subclause shall not prevent the Contractor from paying a subcontractor an amount in excess of that claimed from the Principal, or paying before the time stipulated in this subclause.

### Alternative Dispute Resolution

Each subcontract shall include provisions incorporating the dispute resolution procedures outlined in the Contract except that, in each case, it shall not be mandatory for the subcontractor to pursue the contractual dispute resolution mechanism if the only remedy sought by the subcontractor is an order that the subcontractor's principal pay to it an amount which is not disputed to be due and payable under the subcontract.

### Documents to be Provided to Subcontractors

Each subcontract shall include a provision which requires the subcontractor's principal to provide to the subcontractor, before the subcontractor commences work under the subcontract, a copy of the following provisions of the contract between the subcontractor's principal and its principal:

- the provision equivalent to this Preliminaries clause - **Security of Payment**; and
- the clauses relating to proof of payment of subcontractors, times for payment claims and payment and alternative dispute resolution.

### Register of Subcontracts

Maintain a register of all subcontracts which have a value of \$25,000 or greater showing brief details of the subcontract work, the name, address and telephone number of the subcontractor, and provide an up to date copy of the register when requested by the Principal's Representative.

If further requested by the Principal's Representative, provide an unpriced copy of the subcontract agreement within 14 days of such request.

## 1.13 ADDITIONAL SECURITY AND OBLIGATIONS FOR TRUSTEES

If the Contractor is a trustee:

- before commencing the Works, the Contractor must give the Principal an unconditional undertaking as security for any amount previously agreed in writing by the parties. The unconditional undertaking must be in the form detailed in Schedule 1- **Approved Form of Unconditional Undertaking** and from a financial institution acceptable to the Principal.
- The security will be retained by the Principal against the due and proper performance of the Contract by the Contractor. Unless the Principal has made or intends to make a demand against the unconditional undertaking, the Principal will return the unconditional undertaking within 14 days after the date of Completion of the Works determined or agreed by the Principal.
- The Contractor must not prevent the Principal making any demand against the unconditional undertaking, or prevent the provider of an unconditional undertaking complying with the unconditional undertaking or any demand by the Principal, but the Contractor may seek damages if the Principal makes a demand in breach of the Contract.
- The Contractor must ensure that, for the duration of the Contract, the total value of the trust beneficiaries' loans to the trustee is always greater than the total value of trust beneficiaries' loans from the company.

## 1.14 INDUSTRIAL RELATIONS MANAGEMENT

### Requirement

The Contractor must comply with the NSW Government *Industrial Relations Management Guidelines*.

### Verification of Compliance with Industrial Relations Obligations

Submit before beginning works on the Site, a statement on the Contractor's letterhead, signed by an authorised person, attesting to the Contractor's compliance, in the preceding twelve months, with all employment and legal obligations including, but not limited to:

- payment of remuneration to employees
- annual leave
- Long Service Leave Payment Scheme registration
- workers' compensation insurance, including self- insurance arrangements
- superannuation fund membership and contributions

- over-award payments such as redundancy fund contributions

If the Contractor engages an independent industry or employer association or other specialist organisation to provide an auditing service to verify compliance with employment and legal obligations, a statement or declaration from that organisation may be submitted instead of the statement by the Contractor.

### Project IR Management Details

Submit, before beginning work on the Site, a statement detailing:

- the location of time and wage records and other documents that are required to be kept to verify ongoing compliance with all employment and legal obligations; and
- the names of Federal or NSW awards that are likely to cover subcontractors and other contractors on the project.
- the names of those responsible for coordinating industrial relations on the project;
- an outline of:
  - the Contractor's consultation and communication mechanisms with workers, unions, and employer or industry associations
  - the measures to be implemented to coordinate the interface on the project with subcontractors, unions and other contractors
  - the measures for assessing subcontractor's ability to comply with industrial relations and employment obligations
  - the measures to monitor and verify subcontractors' ongoing compliance

### Failure to comply

If at any time the Contractor has not carried out its obligations under this clause - **Industrial Relations Management**, then notwithstanding any other provision of the Contract, no payment is due to the Contractor until the 7<sup>th</sup> day after the required action has been carried out.

## 1.15 PROTECTION OF CHILDREN AND OTHER VULNERABLE PEOPLE

### Employees

The Contractor must not employ or permit to be employed on work under the Contract at the Site a person whom the Principal advises the Contractor poses unacceptable risks to children or other vulnerable people cared for at that site.

The Contractor must not employ or permit to be employed on work under the Contract at the Site a person who has been convicted of a serious sex offence and is a prohibited person under the *Child Protection (Prohibited Employment) Act 1998* (NSW).

The Contractor must not employ or permit to be employed on work under the Contract at the Site a person who is a prohibited person under the Commission for Children and Young People Act 1998 or is a registrable offender under the *Child Protection (Offenders Registration) Act 2000* (NSW). The Contractor will confirm to the Principal that all workers have completed a *Prohibited Employment Declaration*. The Prohibited Employment Declaration form is available at: [www.kids.nsw.gov.au](http://www.kids.nsw.gov.au) or by contacting the Department of Education and Training's Employment Screening Unit by telephone on 9836 9200.

Completion of the *Prohibited Employment Declaration* must be included in all Site-specific inductions and compliance must be recorded in the Induction Register.

### Code of behaviour

The Contractor must ensure that all persons working on the Site, including but not limited to the Contractor's employees and managers, consultants, subcontractors and suppliers (Contractor Employees) understand and comply with the requirements shown below:

- All Contractor Employees must gain permission to enter the school or facility before commencing work and may only enter approved areas. The Contractor's representative or where a subcontractor is working without the supervision of the Contractor, the subcontractor's representative must report their presence to the person in charge of the school or facility on arrival each day and record, in the Site Visit Log, the details of all Contractor's or subcontractor's employees working at that site that day.
- Contractor Employees should avoid talking with, touching or interacting with any children or residents or other users of the school or facility except where the work requires it or in an emergency or safety situation.
- Contractor Employees must only use approved toilets and other facilities, unless the person in charge of the school or facility gives written authority to use alternative arrangements.
- The work area must not be able to be used or accessed by children, or residents or other users of the school or facility while work is in progress. Clear signs and barricades (where appropriate) must be used to prevent any inadvertent or unauthorised access.
- Appropriate privacy must be maintained when working on toilets and similar facilities. Contractor Employees must ensure that toilets and similar facilities are not occupied or in use by children, residents or other users before entering to perform work, and that work does not continue when use of the facilities is required. Where practicable male employees should perform work on male facilities and female employees on female facilities.
- Contractor Employees must wear clothing that is tidy and in good condition, including a shirt and shorts, trousers or a skirt at all times.
- Contractor Employees should report any concerns about children's behaviour or child abuse to the person in charge of the school or facility.
- Contractor Employees must wear or carry an identity card at all times when on the Site.

### Failure to Comply

If at any time the Contractor has not carried out its obligations under this clause – **Protection of children and other vulnerable people**, then notwithstanding any other provision of the Contract, no payment shall be due to the Contractor until the 7<sup>th</sup> day after the required action has been carried out.

## 1.16 AUDIT AND REVIEW

Make available, on request, all records, including those of or relating to Subcontractors or suppliers, relevant to compliance with requirements of the Contract, for the purposes of audit, review or surveillance. Provide all reasonable assistance during the audits or reviews including attendance by the Contractor.

Promptly implement effective corrective action on matters disclosed by audit or review.

## 2 SITE AND WORKS

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### 2.1 ORDER OF WORK

It is preferable that the first site works be to install new square sided luminaires in food preparation areas. This will enable the replaced fittings to be used for spare parts, such as lens and end caps, in luminaires located in other areas.

### 2.2 WORKING HOURS AND WORKING DAYS

#### Generally

Unless the Contract otherwise provides, the working hours on Site shall be up to 9 hours per day worked between 7 a.m. and 5 p.m., and the working days shall be Monday to Friday inclusive, but excluding public holidays and one day every 4 weeks, usually a Monday which is a rostered day off.

Contract site work on school days shall be outside normal hours of occupation, unless prior agreement with the respective school principal is obtained. Normal hours of occupation are Monday-Friday; 8am-5pm during school term. School term (Term 4 2008) runs from 13 October – 19 December inclusive. Term 1 2009 commences on 29 January 2009.

The majority of the Contract site work will be carried out during school holidays or after 3:30 pm on school days. Site work on school days shall not commence before 3:30 pm and shall be completed before cleaning of the school commences, generally around 5:00 am. The school shall be contacted to confirm cleaning times.

No site work will be permitted during external or internal examination periods. The school principal shall be contacted to advise any examination dates.

The Principal's Representative may approve additional working hours or working days, subject to conditions which may include, but are not limited to:

- restrictions on the performance of work which requires supervision; and
- a requirement that the Contractor meet the costs of supervision, by or on behalf of the Principal, of work performed during the additional working hours or working days.

#### Approval

In approving a variation to the working hours or working days the Principal's Representative may attach conditions. Such conditions may include but are not limited to a prohibition of or restriction on the performance of work which requires supervision and may also include a requirement that the Contractor meets the costs of supervision, by or on behalf of the Principal, of work during times approved by the Principal's Representative.

### 2.3 EXISTING SERVICES

#### Locating Existing Services – Dial Before You Dig

The Contractor is responsible for locating services and in doing so, must comply with the WorkCover Work Near Underground Assets Guideline, which is available on the Internet at:

[www.workcover.nsw.gov.au/NR/rdonlyres/96ACDD20-8FC0-4583-A6F4-97292055A954/0/work\\_near\\_underground\\_asset\\_1419.pdf](http://www.workcover.nsw.gov.au/NR/rdonlyres/96ACDD20-8FC0-4583-A6F4-97292055A954/0/work_near_underground_asset_1419.pdf)

Before commencing excavation the Contractor must obtain, from the Dial Before You Dig information service or relevant public authorities or owners of underground services, written confirmation of the exact positions of all underground services at and around the Site, and verify and prominently mark the locations of the underground services on the Site.

### Dealing with Existing Services

Existing services (such as drains, watercourses, public utilities, telecommunications and other services) obstructing the Works or if damaged in the course of the Contract, must be dealt with as follows:

- if the service is to be continued: repair, divert, relocate as required;
- if the service is to be abandoned: cut and seal or disconnect and make safe as required;

### Cost and Delay

Where an existing service is damaged by the Contractor for any reason whatsoever, the Contractor shall bear all costs and any delays for repairing or disconnecting the service.

### Notification

Notify the Principal's Representative immediately upon the discovery of services obstructing the Works not shown in the Contract documents.

## 2.4 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

### Specification and Statutory Requirements

The Contractor must comply with the NSW Government *Occupational Health and Safety Management Systems Guidelines 4<sup>th</sup> Edition* (OHSM Guidelines) and all statutory requirements including, but not limited to, the *Occupational Health and Safety Act 2000* (NSW) and *Occupational Health and Safety Regulation 2001* (NSW). In the event of any inconsistency, the Contractor must comply with the statutory provisions.

### Appointment as principal contractor

The Contractor, having responsibility for the construction work at all times until the work is completed under the Contract, is appointed principal contractor and controller of the premises for the construction work under Clause 210 of the *Occupational Health and Safety Regulation 2001* (NSW), and is authorised to exercise such authority of the owner as is necessary to enable it to discharge the responsibilities of principal contractor and controller of premises imposed by the *Occupational Health and Safety Act 2000* (NSW) and Chapter 8 of the *Occupational Health and Safety Regulation 2001* (NSW).

### Design

The Contractor must ensure that systematic assessments are undertaken in carrying out any design required, that:

- identify hazards and analyse the associated risks, probability and consequences of injury or illness;
- involve consultation with appropriate people on the safe construction, use and maintenance of the designed asset;
- establish a Design Hazard Register for the designed asset to record any hazards not eliminated in the design that may impose a risk to those constructing, using or maintaining the asset.

An up to date copy of the Design Hazard Register must be provided to the Principal at the date of Completion of the Works or the date the Works are occupied or taken over, whichever is earlier.

### Site-specific Safety Management Plan

Develop and implement a Site-specific Safety Management Plan that complies with the *OHSM Guidelines*.

Submit the Site-specific Safety Management Plan no later than 14 days before construction work commences. Do not start construction work before a complying Site-specific Safety Management Plan has been submitted.

Ensure the following risks are covered in the Site-specific Safety Management Plan:

- Working with electricity
- Working on an occupied site
- Working on a site that may contain asbestos material
- Working on a site that may contain hazardous substances such as capacitors containing PCB
- Working at heights

This list of risks is not exhaustive and must not be relied upon by the Contractor. The Contractor must undertake its own detailed analysis of all occupational health and safety risks under the Contract.

### Site Safety Rules

Develop site safety rules that are equal to or better than the following minimum set of site safety rules, include them in the Site-specific Safety Management Plan and ensure implementation.

Site safety rules must make it a condition of entry to the applicable work site that all employees and visitors comply with their provisions, including:

- **Construction OHS Induction.** All persons must display evidence of completing OHS Induction training prior to being inducted to commence work on the Site.
- **Site Induction.** All persons working on the Site must attend a Site Induction prior to entering it. Visitors may enter a work site if, either, they first attend a Site Induction, or if they are accompanied by a person who has attended a Site Induction. All persons each day must sign in and out on the Site Register.
- **Safe Work Method Statements.** Safe Work Method Statements must be prepared and used for all work activities assessed as having a safety risk.
- **Toolbox Talks.** Weekly or more regular discussions must be held with workers to consult on site safety matters.
- **Safety Helmets, Safety Footwear and Safety Vests.** Safety helmets and steel-capped safety footwear must be worn by all supervisors, employees, and visitors in the construction area at all times. The footwear must comply with AS 2210. Safety vests must be worn when moving plant is present or work is undertaken near traffic.
- **Personal Protective Equipment (PPE).** PPE, such as safety eye protection, hearing protection, safety gloves and masks and the like, must be worn when welding, drilling and with all other tasks with similar risks.
- **Accidents and Incidents.** Accidents, incidents and injuries must be reported immediately to the Contractor's and applicable subcontractor's site representative in charge.
- **Alcohol and Drugs.** The consumption of, or being under the influence of, alcohol and illegal drugs on the Site is prohibited.

- **Amenities.** Access to clean toilets and meal facilities, cool, clean drinking water, and the other requirements of the WorkCover [Code of practice: Amenities for construction work](#) must be provided for all persons.
- **Electrical.** All electrical work and electrical plant must comply with the WorkCover [Code of practice: Electrical practices for construction work](#).
- **Emergency evacuation.** Arrangements must be included in the Site Induction and clearly identified.
- **Excavations.** Barricading and signage for all excavations must be provided, with excavations 1.5 metres or more deep also to be benched, battered or shored. See the WorkCover [Code of practice: Excavation](#).
- **Fire Prevention.** Fire prevention must be used by all persons on the Site. An appropriate fire extinguisher must be on hand for all welding sets and oxy acetylene work.
- **First Aid.** All persons requiring first aid treatment must contact the first aid officer who will administer the treatment and record the injury in the WorkCover Register of Injuries, including the person's name and the nature of the injury.
- **Hazardous Substances.** Chemicals and hazardous substances must be used and stored in compliance with up to date Material Safety Data Sheets (MSDS) and details recorded in the Register of Hazardous Substances.
- **Housekeeping.** Work areas must be kept clean and tidy, with rubbish and other safety hazards cleaned up promptly. All protruding nails must be removed immediately from timber.
- **Leads and Power Tools.** All leads, power tools and electrical equipment must be inspected and tagged by a qualified person prior to their use and then at monthly intervals. See the WorkCover [Code of practice: Electrical practices for construction work](#).
- **Mobile Plant.** Every owner of plant must ensure plant is registered with WorkCover when required and operators are appropriately qualified. Plant must be fitted with working hazard lights/reversing lights and beepers. See the WorkCover [Code of Practice for Moving Plant on Construction Sites](#).
- **Overhead Power Lines.** The requirements of the WorkCover [Code of Practice – Work near Overhead Power Lines](#) must be complied with.
- **Site Security and Public Access.** Security measures, including perimeter fencing, must be used to prevent unauthorised access to construction areas and ensure safe access and passage for all those on and adjacent to the Site. Security must comply with Clause 235 of the OHS Regulation 2001 and the WorkCover [Position paper: The requirements for fencing](#).
- **Underground Services.** Prior to any underground work being carried out, services must be located using Dial Before You Dig, a services locator, potholing and the other precautions identified in the WorkCover [Work Near Underground Assets Guideline](#).
- **Working at Height.** Working at heights must be in accordance with WorkCover requirements, including certification of formwork and scaffolding. See the WorkCover [Guide to Safe Working at Heights](#).

## OHS Management Monthly Report

Submit, no later than the seventh (7<sup>th</sup>) day of each month, an OHS Management Monthly Report, detailing *Inspection, testing and servicing* activities, *Internal reviews* and *Incident management and corrective action*, and including the information listed below, as evidence of the implementation of the Site-specific Safety Management Plan during the previous month.

### Contract Details

- Contract
- Contractor
- Contractor's representative
- Signature and Date
- Period Covered

### Implementation of *Risk management* (OHSM Guidelines Section 5, element 1)

Summary of OHS inspections and reviews carried out to identify risks and hazards and ensure risk management controls are being implemented for:

- plant and equipment
- incoming products
- work site conditions
- adherence to and completeness of Risk Assessments, Safe Work Method Statements and Site Safety Rules
- work site access and exits
- personal protective equipment

### Implementation of *OHS training* (OHSM Guidelines Section 5, element 3)

An up to date copy of the Induction Register and details of OHS training carried out.

### Implementation of *Incident management* (OHSM Guidelines Section 5, element 4)

Details of:

- any OHS incidents or OHS issues, including non-compliance with OHS procedures and near misses
- implementation of incident management
- implementation of corrective action
- OHS statistics for entire the Contract including:

	This Month	Total Cumulative
Number of Lost Time Injuries		
Number of Hours Worked		
Number of Hours Lost Due to Injury		
Lost Time Injury Frequency Rate LTIFR		
Number of OHS Management Audits		
Number of OHS Inspections		

**Implementation of Safe Work Method Statements** (*OHSM Guidelines* Section 5, element 6)

An up to date copy of the register of Safe Work Method Statements, including confirmation that the principal contractor has ensured that all Safe Work Method Statements comply with the *OHS Regulation 2001* and that their implementation is being monitored.

**Incident Reports**

Ensure compliance with the notification and other requirements of *OHS Regulation 2001* Clauses 341 and 344 for accidents, incidents and non-disturbance occurrences, including immediate notification of WorkCover where required.

Immediately notify the Principal of any accident or incident defined in *OHS Regulation 2001* Clauses 341 and 344.

Provide a written report to the Principal within twenty-four hours of the incident, giving details of the incident and evidence that notification requirements have been met.

When requested, provide an incident investigation report, including identification of the cause of the incident and corrective actions taken, in the form directed.

**Prohibition and Improvement Notices and On-The-Spot Fines**

Immediately notify the Principal of any Prohibition and Improvement Notice (PIN) or on-the-spot fine issued by WorkCover. Provide the Principal with a copy of the PIN or fine notice and written details of the corrective action taken by the Contractor and/or the applicable subcontractor to rectify the breach and to prevent recurrence.

**Electrical work on electrical installations**

In compliance with section 207 of the *OHS Regulation 2001*, ensure that electrical work on an electrical installation is not carried out while the circuits and apparatus of the part of the installation that is being worked on are energised, unless it is necessary to do so in the interests of safety and the risk of harm would be greater if the circuits and apparatus were de-energised before work commenced.

**Independent Certification of Formwork**

In this clause, the terms “qualified engineer” and “formwork” have the meanings given in Clause 209 of the *OHS Regulation 2001*. “Related Entities” means businesses, one of which is owned wholly or in part by the other or that have proprietors, directors, officers, shareholders or employees in common.

Inspection and certification of formwork, if required by Clause 233 of the *OHS Regulation 2001*, must be carried out by a qualified engineer who is not a proprietor, director, officer, or employee either of the entity carrying out the formwork erection or a Related Entity to that entity. In addition, if the Contractor carries out the design of the formwork, then the qualified engineer must not be a proprietor, director, officer or employee either of the Contractor or a Related Entity to the Contractor.

If such inspection and certification are required, the Contractor and any subcontractors involved must include the inspection and certification as actions in Safe Work Method Statements for the erection and use of formwork, and they must be hold points in the Contractor’s and subcontractors’ Inspection and Test Plans.

Submit formwork certification before commencing the use of the formwork. Do not use the formwork before this certification is submitted.

**Failure to Comply**

If at any time the Contractor has not carried out its obligations under the Contract in relation to occupational health and safety management, then notwithstanding any other provisions of the

Contract, no payment will be due to the Contractor until the 7<sup>th</sup> day after the required action has been carried out.

## 2.5 HAZARDOUS SUBSTANCES

### Definition

Hazardous Substance means a substance that is listed in the document entitled *List of Designated Hazardous Substances* published by Worksafe Australia; or a substance that fits the criteria for a hazardous substance set out in the document entitled *Approved Criteria for Classifying Hazardous Substances* published by Worksafe Australia.

Asbestos, material containing asbestos, polychlorinated biphenyl (PCB) and lead based paints are recognised as hazardous substances. Other substances in certain situations are also considered hazardous and therefore require controlled handling. Examples are glues, solvents, cleaning agents, paints, and water treatment chemicals.

Work involving stone, rock, concrete, masonry and such materials containing silica, is work under the Contract whether explicitly identified in the Specification or not. The Contractor is responsible for the control of any hazard which may arise from the presence of silica.

### Response to Unexpected Discovery

If any hazardous substance not specified in work under the Contract is discovered on the Site the Contractor must suspend all work which may result in exposure to such hazardous substance and notify the Principal's Representative immediately of the type of substance and its location.

With the initial notification, or as soon as practicable thereafter, submit details, including:

- the additional work and additional resources the Contractor estimates to be necessary to deal with the substance so that work and subsequent use of the Works may proceed safely and without risk to health
- the time the Contractor anticipates will be required to deal with the substance and the expected delay in achieving Completion;
- the Contractor's estimate of the cost of the measures necessary to deal with the substance; and
- other details reasonably required by the Principal's Representative.

The Contractor must, in planning and carrying out any work dealing with the substance take all reasonable steps:

- to carry out the work concurrently with other work wherever possible; and
- to otherwise minimise effects of the work on the Contractual Completion Date.

### Responsibility For Decontamination

Control and decontamination of any hazardous substances is the responsibility of:

- the Principal, in respect of any such substances not identified in the Contract Documents, which are discovered on the Site; and
- the Contractor, in respect of any such substances identified in the Contract Documents.

### Decontamination By Principal

Where the Principal is responsible for the control and decontamination of any hazardous substances, the Principal's Representative may suspend the whole or any part of the Works until the hazardous substances are isolated or removed.

### Decontamination By Contractor

Where the Contractor is responsible for the control and decontamination of the Site following the discovery of hazardous substances, handle, use, isolate, remove and dispose of such substances in accordance with statutory requirements.

The Environment Protection Authority or Waste Service NSW may advise of suitable disposal sites.

### Working Hours

When the Contractor is required to decontaminate hazardous substances on occupied Sites, all such decontamination shall be carried out outside normal hours of occupation, unless otherwise approved in writing by the Principal's Representative. Normal hours of occupation are:

- Monday to Friday (during school terms) 8am-5m

## 2.6 ASBESTOS REMOVAL

### Requirement

Where the Contractor is responsible for asbestos removal work, comply with the relevant statutory requirements, standards, codes and guidelines, including but not limited to the:

- *Occupational Health and Safety Act 2000* (NSW)
- *Occupational Health and Safety Regulation 2001* (NSW)
- WorkCover Authority of NSW requirements
- Australian Safety and Compensation Council *Code of Practice for the Safe Removal of Asbestos 2<sup>nd</sup> Edition* (2005)
- Australian Safety and Compensation Council *Code of Practice for the Management and Control of Asbestos in Workplaces* (2005)
- Australian Safety and Compensation Council *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2<sup>nd</sup> Edition* (2005)
- *Environmentally Hazardous Chemicals Act 1985* (NSW)
- *Waste Avoidance and Resource Recovery Act 2001* (NSW)

### Notification and Permit

Not less than seven days prior to commencing any asbestos removal work, notify the local office of WorkCover and the Principal of the intention to carry out that work.

Where the regulations requires a licence for asbestos removal work, before the work commences, submit a copy of the current licence held by the entity that will undertake the work and a copy of any WorkCover permit required for the work.

### Monitoring

Provide air monitoring by an independent testing authority on each day during asbestos removal and on completion of each area where removal has been undertaken.

### Clearance Certificate

Submit to the Principal a clearance certificate from an independent testing authority at the completion of the asbestos removal work.

## 2.7 ENVIRONMENTAL MANAGEMENT

### Requirement

The Contractor must comply with the NSW Government *Environmental Management Systems Guidelines* which are available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/system/index\\_procurement\\_guideline\\_documents.doc](http://www.managingprocurement.commerce.nsw.gov.au/system/index_procurement_guideline_documents.doc)

### Environmental Management Plan

Develop and implement an Environmental Management Plan that complies with the *EMS Guidelines*.

The Contractor may elect to complete Schedule to Preliminaries - **Environmental Management Plan**, adding objectives and actions as required to suit the risks/hazards associated with the work under the Contract, and implement the completed version as the Environmental Management Plan.

Submit the Environmental Management Plan no later than 7 days before construction work commences. Do not start construction work before a complying Environmental Management Plan has been submitted.

The Environmental Management Plan must address the following risks:

- nil mandatory

This list of risks is not exhaustive and must not be relied upon by the Contractor. The Contractor must undertake its own detailed analysis of all environmental risks under the Contract.

### Incident reports

Ensure compliance with the notification and other requirements of the *Protection of the Environment Operations Act 1997 (POEO Act)*.

Immediately notify the Principal of any pollution incident that may cause material harm to the environment, providing evidence that notification requirements of the POEO Act have been met, where applicable.

Report immediately the details of any waste removed from the Site and not disposed of at a lawful facility.

When requested, provide an incident investigation report, including identification of the cause of the incident and corrective actions taken, in the form directed.

### Failure to comply

If at any time the Contractor has not carried out its environmental management obligations under the Contract, then notwithstanding any other provisions of the Contract, no payment is due to the Contractor until the 7<sup>th</sup> day after the required action has been carried out.

## 2.8 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

### Requirement

Apply strategies to maximise the achievement of ecologically sustainable development in the design, construction and operation of the Works, including reducing pollutants, greenhouse gas emissions and demand on non-renewable resources such as energy sources and water.

### Restricted timbers

Do not use the following timbers or their products for work under the Contract:

- rainforest timbers, unless certification is provided that they are plantation grown;
- timber from Australian high conservation forests.

## 2.9 WASTE MANAGEMENT

### Requirement

Implement waste minimisation and management measures, including:

- recycling and diverting from landfill surplus soil, rock, and other excavated or demolition materials, wherever practical;
- separately collecting and streaming quantities of waste concrete, bricks, blocks, timber, metals, plasterboard, paper and packaging, glass, lamps and plastics, and offering them for recycling where practical.

Ensure that no waste from the Site is conveyed to or deposited at any place that cannot lawfully be used as a waste facility for that waste.

All redundant components of the upgraded luminaires and redundant luminaires become the property of the Contractor except working 65 Watt lamps. Working 65 Watt lamps shall be returned to the Principal's Representative, each individually wrapped in protective corrugated cardboard.

Fluorescent lamps, other than 65 Watt working/serviceable lamps, shall be packed and transported to a fluorescent tube recycling service for disposal.

The Principal's Representative shall nominate an area where a waste removal bin can be placed. This bin shall be covered at all times, except when loading with waste materials. The Contractor is to keep the area around the bin tidy and free of any spilt waste materials. Do not overload the bins above the lip.

### Monitoring

Monitor and record the volumes of waste from each school and the methods and locations of disposal.

Submit a progress report every two months, and a summary report before Completion, on the implementation of waste management measures, including the total quantity of material purchased, the quantity purchased with recycled content, the total quantity of waste generated, the total quantity recycled, the total quantity disposed of and the method and location of disposal in the form of a *Waste Recycling and Purchasing Report* available on the Internet at:

[www.managingprocurement.commerce.nsw.gov.au/contract\\_management/cm\\_sf\\_waste\\_recycling\\_and\\_purchasing\\_report.doc](http://www.managingprocurement.commerce.nsw.gov.au/contract_management/cm_sf_waste_recycling_and_purchasing_report.doc)

With the *Waste Recycling and Purchasing Report*, submit waste disposal certificates and/or company certification confirming appropriate, lawful disposal of waste.

## 2.10 PEST CONTROL

Do not use any chemical pesticides or termiticides for new construction work. Use preventive treatment by physical means to minimise the risk of pest infestations.

Chemical treatments may be used in existing buildings only as a last resort for the eradication of pest and termite infestations. Chemical pesticides used for this purpose must be registered by the National Registration Authority for Agricultural and Veterinary Chemicals and applied by a Pest Control Operator licensed by WorkCover.

Pest preventive methods must comply with AS 3660.1-2000 Protection of Buildings from Subterranean Termites (except for references to chemical soil barriers), as well as supplementary standards for existing buildings.

## 2.11 WORK METHOD

If the Contract prescribes a particular work method or the Principal or Principal's Representative directs that a particular work method must be used to the exclusion of the other work methods, then that work method is part of the Contract.

Otherwise, the work method is not part of the Contract and the Contractor is free to use any work method. This is so even though, before or after acceptance of the tender, the Contractor made known to the Principal the Contractor's proposed work method and the Principal accepted or approved it.

If the work method is not part of the Contract, the fact that the proposed work method is impractical or impossible or the Contractor, with or without the approval of the Principal's Representative, uses another work method will:

- not entitle the Contractor to make a claim on the Principal;
- not be grounds for an extension of time for Completion;
- not cause the Contract to be frustrated.

## 2.12 STANDARDS

Where the Contract requires compliance with a standard or Code, unless otherwise specified that Standard or Code shall be the one current at the closing date for tenders, except for the Building Code of Australia, which shall be the one current at the Date of Completion.

Where the Contract refers to an Australian Standard it does not preclude the adoption of a relevant international standard.

## 2.13 CLEANING UP

All visible external and internal surfaces, including fittings, fixtures and equipment, must be free of marks, dirt, dust, vermin and unwanted materials, at Completion.

## 2.14 PROPRIETARY ITEMS

Identification by the Principal of a proprietary item does not necessarily imply exclusive preference for that item, but indicates the required properties of the item.

The Contractor may offer an alternative to any proprietary item. Apply in writing for approval to use the alternative. The request must be accompanied by all available technical information and describe how, if at all, the alternative differs from the proprietary item and how it will affect other parts of the Works and performance of the Works.

Except to the extent that the approval, if any, of the Principal's Representative includes a contrary provision, the approval shall be deemed to include the conditions that:

- use of the alternative must not directly or indirectly result in any increase in the cost to the Principal of the Works;
- the Contractor must indemnify the Principal against any increase in costs;
- use of the alternative must not directly or indirectly cause any delay to the Works and if it does, the Contractor will compensate the Principal for any loss which the delay causes.

## 2.15 GUARANTEES

### Generally

Obtain and ensure that NSW Department of Education and Training will have the benefit of warranties or guarantees as specified in the Contract or offered by suppliers, including warranties or guarantees that are obtained by, or offered to the subcontractors of the Contractor.

## 2. PRELIMINARIES

### 2.16 SCHEDULE TO PRELIMINARIES - ENVIRONMENTAL MANAGEMENT PLAN

(Note: Refer to Preliminaries clause – **Environmental Management** where the Contractor elects to adopt this Plan. The Contractor must complete the Environmental Management Plan by inserting contract-related requirements as necessary, or 'NA' where a particular item is not applicable.)

### IMPLEMENTATION

ENVIRONMENTAL OBJECTIVES	ACTION TO BE TAKEN	WHEN ACTION WILL BE TAKEN	PERSON RESPONSIBLE	ACTION COMPLETED
<b>1. CONSERVATION OF PLANTS &amp; WILDLIFE</b>				
1.1 Protect flora and fauna	Protect existing trees and plants at and around the Site from damage unless approved by the Principal			
	Do not remove trees and plants without approval from the Principal			
	Control weeds on the Site			
	Protect birds, fish and animals at and around the Site from harm			
	Do not remove birds, fish and animals from the Site without the written agreement of the Principal			
	Do not bring birds, fish, animals and plants onto the Site without written agreement from the Principal			
	Minimise the use of pesticides and herbicides for minimal impact on the environment			
1.2 Control movement of pedestrians, materials, vehicles and plant to minimise damage to the environment	Use only designated routes for access to the Site			
	Use designated site roads and access routes for all movements on and adjacent to the Site			
	Locate compounds, and park all vehicles and plant, in designated areas on the Site			
<b>2. CONSERVATION OF RESOURCES</b>				
2.1 Design for energy efficiency	Adopt energy efficiency, environmental enhancement and waste minimisation as design criteria			
	Use low energy usage construction, fittings and appliances (including heating/cooling and lighting)			
2.2 Select materials to minimise: 1. resource use	Incorporate conservation of resources obligations into subcontracts			
	Reuse all topsoil on the Site and minimise the use of imported topsoil			
	Mulch and chip cleared vegetation as appropriate			

## 2. PRELIMINARIES

ENVIRONMENTAL OBJECTIVES	ACTION TO BE TAKEN	WHEN ACTION WILL BE TAKEN	PERSON RESPONSIBLE	ACTION COMPLETED
and waste 2. ozone depleting effects 3. detrimental effects on air, water, and land quality  2.3 Conserve heritage items and other physical attributes of the Site	Maximise use of materials that are recyclable or from a sustainable source			
	Use timber from sustainable managed sources only			
	Implement a strategy to reduce the quantity of waste, including minimising and recycling packaging			
	Use low water demand fittings & appliances (dual flush toilets, water conserving shower roses & taps)			
	Minimise the use of solvents, glues, paints and other materials which release odours or vapour			
	Comply with statutory requirements for conservation of heritage items			
	Manage the conservation of physical attributes of the Site, including (LIST THE ATTRIBUTES): •			
<b>3. POLLUTION CONTROL</b>				
3.1 Control discharges and emissions from vehicles and plant to minimise damage to the environment	Do not use vehicles, plant or equipment that produce excessive emissions			
	Monitor emissions from vehicles and plant			
	Do not bring vehicles or plant and equipment with hydraulic fluid, fuel or oil leaks to the Site			
	Wash down vehicles, plant and equipment only in controlled areas acceptable to the Principal			
	Prevent and clean up any spills from transport vehicles			
3.2 Prevent pollution of stormwater and adverse effects on land and vegetation by control of cleaning activities and discharges	Use only water based, non-toxic paints and use only water to clear point brushes and rollers			
	Control all run-off from cleaning activities			
	Discharge only non-toxic cleaning products generally			
3.3 Control soil erosion	Identify the existing drainage paths on the Site and protect them against siltation			
	Protect vulnerable and exposed surfaces and stockpiles against scouring			

## 2. PRELIMINARIES

ENVIRONMENTAL OBJECTIVES	ACTION TO BE TAKEN	WHEN ACTION WILL BE TAKEN	PERSON RESPONSIBLE	ACTION COMPLETED
	Install the following sediment control devices before starting construction (LIST THE DEVICES):			
	•			
	Monitor and manage the effectiveness of sediment control devices			
	Remove sediment control devices when no longer required			
3.4 Prevent release of soil contamination to the environment	Establish, before commencing work on the Site, in consultation with the Principal, if contaminated soil is present at the Site			
	If contaminated soil is present, manage the work to prevent release to the environment			
3.5 Manage refrigerants and other dangerous goods to meet statutory requirements	Ensure the procedures used for the charging and disposal of refrigerants and use of dangerous goods meet statutory obligations			
	Use appropriately trained employees			
	Obtain the licences required			
	Document dangerous goods identification, disposal and management, and retain the documentation			
3.6 Minimise noise and vibration impacts on neighbours, occupants and users of any facility	Comply with noise limits and conditions prescribed by the EPA, Department of Environment and Conservation and Council (as applicable)			
	Use equipment in good repair and condition			
	Use noise suppression equipment (e.g. silencers on compressors) and acoustic barriers as required			
	Do not expose workers, neighbours or visitors to excessive noise, and cooperate and coordinate with operators of any neighbouring facility			
	Do not expose people or property to excessive vibrations			
3.7 Comply with Trade Waste Licence conditions applicable	Implement procedures to avoid breaches of the Trade Waste Licence conditions (may apply to discharges from cooling water systems, condenser water systems, heating water systems, cooking facilities, engine discharges, water treated with chemicals or where large sediment loads exist)			

## 2. PRELIMINARIES

ENVIRONMENTAL OBJECTIVES	ACTION TO BE TAKEN	WHEN ACTION WILL BE TAKEN	PERSON RESPONSIBLE	ACTION COMPLETED
to the facility				
3.8 Minimise air pollution from dust and emissions	Minimise areas of exposed earth and stockpiles			
	Cover and secure materials in open transport			
	Use water sprays and/or other means to control dust			
	Keep emissions within statutory or other required limits			
	Minimise fire risks, and prevent and control fires			
3.9 Dispose of waste in accordance with statutory requirements	Implement appropriate disposal procedures for all waste items, including using lawful places for disposal, recording and reporting on the method and location of disposal and any non-conformances			
	<b>EITHER</b> Provide valid disposal certificates for each applicable item  <b>OR</b> Provide company certification of appropriate disposal of the following (LIST THE ITEMS): <ul style="list-style-type: none"> <li>• Packaging materials</li> <li>• Replaced or redundant materials</li> <li>• Chemicals</li> <li>• Oils and greases from machinery, cooking and other processes</li> <li>• Paints and solvents, including those used to clean equipment, tools and brushes</li> <li>• Cleaning materials and rags</li> <li>• Materials unsuitable for re-use, including hazardous materials such as asbestos</li> </ul>			
3.10 Minimise damage to the environment from	Document emergency procedures to manage all reasonably foreseeable harm, including spills and other environmental emergencies			
	Ensure emergency procedures are followed			

## 2. PRELIMINARIES

ENVIRONMENTAL OBJECTIVES	ACTION TO BE TAKEN	WHEN ACTION WILL BE TAKEN	PERSON RESPONSIBLE	ACTION COMPLETED
emergencies	Obtain the agreement of the Principal to procedures for handling oil, chemicals and other dangerous goods before placing them on the Site, including secure storage arrangements			
	Re-instate and clean damaged areas and features, including work areas			
	Re-instate damaged eco-systems and features to their previous condition			
	Identify key contacts: (LIST NAMES and ROLES) •			
3.11 Comply with environmental requirements and rectify breaches	Inspect the Site daily to ensure appropriate environmental controls are in place and operating effectively, and that all environmental management requirements are being met			
	Cooperate with environmental audits by others			
	Rectify any environmental breaches identified within the time specified in an audit or by the Principal			
<b>4. RECORDS AND REPORTING</b>				
4.1 Provide sufficient documentation to demonstrate appropriate environmental management, including:	Prepare, submit and update the Environmental Management Plan			
	Maintain and submit records of environmental training			
	Report on implementation of the Environmental Management Plan			
	Submit applicable waste disposal certificates and/or company certification of appropriate disposal			
	Submit to the Principal copies of correspondence with regulators, including incident reports and notification of non-compliances or fines			
	Submit documentation evidencing that the causes of non-compliances have been corrected			
	Keep records for inspection securely filed using an effective document retrieval system			
4.2 Report environmental incidents	Immediately report all environmental incidents to the Principal			
	Immediately report environmental incidents as otherwise required			

**END OF SECTION - PRELIMINARIES**

## 3 TECHNICAL SPECIFICATION

### 1 GENERAL

#### 1.1 BACKGROUND

The purpose of this lighting upgrade is to lower the electrical consumption, improve artificial lighting illumination and replace rapid start control gear with electronic ballasts in fluorescent luminaires at schools detailed below. The site addresses for the schools are as follows:

Contract 0801772 Illawarra Region	
Figtree High School Gibsons Rd Figtree 2525 Phone: 4271 2787 Fax: 4271 6626	Nowra High School Moss St Nowra 2541 Phone: 4421 4977 Fax: 4421 3284
Vincentia High School The Wool Rd Vincentia 2540 Phone: 4441 6766 Fax: 4441 6000	Warilla High School Keross Ave Barrack Heights 2528 Phone: 4296 3055 Fax: 4297 2817

The surface mounted and suspended fluorescent luminaires at the above schools are of various types, some with wrap around diffusers, others with end caps, battens, weatherproof and vandal resistant. Some schools may also have recessed fluorescent luminaires, cylindrical (Tubelight type) suspended fluorescent luminaires and HID luminaires. The age of the luminaires also vary as building additions have occurred during the life of the schools. Many luminaires are nearing the end of their serviceable life.

It appears a hazardous materials review has been conducted in the past and capacitors containing polychlorinated biphenyl (PCB) have been removed. However, all capacitors found during the upgrade shall be inspected. If listed in the Australian and New Zealand Environmental and Conservation Council (ANZECC) information booklet "Identification of PCB-Containing Capacitors" as "CONTAINING PCBs", the capacitors shall be removed and disposed in accordance with the relevant clauses contained in this booklet and the relevant clauses contained in this document. Any capacitor not identified in the ANZECC booklet as "NOT CONTAINING PCBs" shall be treated as containing PCB and removed and disposed as above.

The schools are generally occupied from 8.00 am to 5.00 pm during school terms. The majority of the Contract site work will be carried out during school holidays or after 3:30 pm on school days. Site work on school days shall not commence before 3:30 pm and shall be completed before cleaning of the school commences.

The existing luminaires are fitted with one, two or three lamps. The lamps in the luminaires to be replaced or retrofitted are nominally 600, 1,200 or 1,500 mm in length.

Decisions made to constrain cost of the refurbishment were:

- to retain the existing luminaire positions,
- upgrade, retrofit or replace the existing luminaires with energy efficient luminaires using the existing building wiring,
- by using the existing wiring, disturbance to the building surfaces and structure will be kept to a minimum.

## 1.2 SCOPE OF WORK

At the schools nominated in section 1.1, investigate, design, supply, install and commission complete energy efficient lighting systems, that includes, but is not limited to:

- Upgrade existing surface mounted Type E enclosed luminaires with rapid start control gear and prismatic diffuser by fitting new electronic ballast(s), new lampholders, new diffuser retaining clips and hinges as required to replace any broken items, new tri-phosphor lamp(s) and cleaning the reflective surfaces and diffuser. An option is to fit a retro-fit kit and clean the diffuser. Any existing luminaire fitted with three lamps is to be upgraded by reducing the number of lamps to two as well as upgrading the luminaire as described above for two lamps;
- Upgrade existing surface mounted luminaires fitted with end caps by fitting new electronic ballast(s), new lampholders, new tri-phosphor lamp(s) and cleaning the reflective surfaces and diffuser. Any existing luminaire fitted with three lamps is to be upgraded by reducing the number of tubes to two as well as upgrading the luminaire as described above for two lamps;
- Upgrade existing recessed luminaires fitted by fitting new electronic ballast(s), new lampholders, new tri-phosphor lamp(s) and cleaning the reflective surfaces and diffuser. Any existing luminaire fitted with three lamps is to be upgraded by reducing the number of tubes to two as well as upgrading the luminaire as described above for two lamps;
- Upgrade existing weatherproof and vandal resistant surface mounted luminaires by fitting new electronic ballast(s), new lampholders, new tri-phosphor lamp(s) and cleaning the reflective surfaces and diffuser. Any missing or broken lenses are to be replaced;
- Replace existing luminaires in food preparation areas with new luminaires with square sides, fitted with electronic ballast(s), tri-phosphor lamps and prismatic diffuser, designed for use in food preparation areas. Any existing luminaire fitted with three lamps is to be replaced with a new luminaire fitted with electronic ballast(s), two tri-phosphor lamps and prismatic diffuser designed for use in food preparation areas.
- Replace existing single lamp and twin lamp battens with new single tube or twin lamp battens, respectively, fitted with electronic ballast(s) and tri-phosphor lamp(s). Some battens to be fitted with diffusers or wire guards;
- Clean and re-lamp High Intensity Discharge (HID) lamp luminaires including downlights, low bay luminaires, high bay luminaires and luminaires fitted with sphere or cylinder diffusers;
- Upgrade existing special linear fluorescent lamp luminaires, including Tube Lights, by fitting new electronic ballast(s), new lampholders, new tri-phosphor lamp(s) and cleaning the reflective surfaces and diffuser, if applicable. Any broken diffusers are to be replaced;
- Replace existing luminaires with new weatherproof or vandal resistant surface mounted luminaires fitted with new electronic ballast(s), new lampholders, new tri-phosphor lamp(s);
- Replace existing luminaires with new bulkhead surface mounted luminaires fitted with a compact fluorescent lamp;

- Replace existing incandescent General Lighting Service (GLS) lamps with compact fluorescent lamps;
- Removal and disposal of any capacitors containing PCB. All capacitors found containing PCB or not listed in the ANZECC booklet shall be removed, handled, stored and disposed of in accordance with instructions contained in the ANZECC booklet using a waste transport company licensed to transport PCB waste;
- Measurement and reporting to the Principal of illuminance levels in all areas after completion of the upgrades in accordance with Appendix B of AS/NZS 1680.1-2006. The Principal may also request optional recording of digital images at the completion of the projects;
- Addition of specular reflectors to luminaires and/or additional new luminaires, after written agreement with the Principal's Representative, in the areas where the artificial lighting illuminance level, according to measurement standards set out in Appendix B of AS/NZS 1680.1-2006 is less than 300 lux after the upgrade;
- Replace end cap type luminaires with broken/missing diffusers and/or broken/missing end caps with new enclosed fluorescent luminaires, and;
- Other minor work as required.

### 1.3 NUMBER OF LUMINAIRES TO BE REPLACED

The Tender Schedules, Schedule of Prices – Lump Sum Items provides estimated quantities and types of luminaires. It should be stressed that these schedules may not be 100% accurate and a Schedule of Rates for Variations is included in the Tender Schedules for flexibility to cover any discrepancies. The Contractor shall check luminaire quantities before placing any orders.

## 2 LIGHTING SYSTEMS PERFORMANCE REQUIREMENT

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The Contractor shall design a lighting system for the schools nominated in section 1.1 that complies with the performance requirements of this specification. The Contractor shall submit the lighting design of all upgraded rooms to the Principal's Representative for approval before placing orders for luminaires.

Where the proposed lighting installation, using the existing luminaire locations and number of luminaires, does not comply with the maintenance illuminance levels for the respective areas contained in Table E1 of AS 1680.2.3, the Principal's Representative shall be advised. The Principal's Representative shall advise the Contractor if additional luminaires are required.

The glare index shall be equal to or less than the recommendations contained in AS 1680.2.3 Table E1 for the respective areas.

The lamp output to be used in glare index testing shall be that nominated in clause 3.13, Fluorescent Lamps, at the optimum output temperature. The uniformity of illuminance within all rooms and areas shall not be less than 0.7.

The replacement lighting systems shall be energy efficient to minimise energy consumption. This will require the use of highly efficient luminaires with a photometric performance that provides even light distribution based on existing luminaire locations. For the purpose of calculating maintained illumination levels, the following data shall be used:

- height from the ceiling to the working plane, 2.0 metres,
- reflection factor of the ceiling, 70%,
- reflection factor of the walls, 50%,
- reflection factor of the floor, 20% and,

- maintenance factor of 0.8.

### 3 REPLACEMENT AND UPGRADED LUMINAIRES

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#### 3.1 GENERAL

Preference shall be given to offers that provide luminaires and retrofit kits of Australian and New Zealand origin.

All equipment will be securely held to the luminaire via mechanical fixings, e.g. the use of “Velcro” and glue etc is not acceptable.

Unless otherwise approved, the following new components shall be of the same manufacture throughout the lighting upgrade:

- All lamps and
- All electronic control gear.

Construct luminaire bodies robustly and rigidly with material gauges suitable for adequate rigidity and life. Material shall be folded sheet metal, cast aluminium or anodised extruded aluminium. Stable colour-fast tough plastic mouldings or castings may be used in the construction of bodies.

Measure luminaire rigidity by its deflection when suspended from diagonally opposite mounting points. Testing shall be on complete luminaires fitted with any of the accessories and options available.

Eliminate vibration and associated noise which may be generated by the luminaire and equipment.

#### 3.2 ENCLOSED FLUORESCENT LUMINAIRES

The existing fluorescent lamp surface mounted enclosed luminaires are to be upgraded, replaced with new surface mounted enclosed luminaires or fitted with retrofit kits, as nominated in the Schedules to be supplied to the Contractor, with the performance and components as detailed in clauses 3.12, 3.13, 3.14, 3.15, 3.16 and 3.17. Upgraded luminaires are to be maintained as per clause 3.20.

Luminaires shall contain one or twin lamps rated at 58, 36 or 18 Watts each. The lamps shall be easily replaced without the use of tools. New surface mounted luminaires shall be hard wired into the existing lighting circuits.

Any existing luminaire fitted with three lamps is to be upgraded, replaced or fitted with a retrofit kit fitted with electronic ballast(s), two tri-phosphor lamps and prismatic diffuser.

Design and construct new luminaires to eliminate entry of insects into the luminaire. The new luminaires shall in ingress protection (IP) rating of 5X. Provide each new luminaire with a foam rubber seal at the centre rear cable entry hole. Provide a neat cut across the foam to facilitate cable entry. The operation of the foam section is to form a seal between the back of the luminaire and the ceiling or supporting member, and to also seal against the cables at their point of entry to avoid dust and vermin entry.

Fix refracting lens to the luminaire body by suitable unobtrusive clamps or clips with a compressible seal between all mating surfaces of the refracting lens and luminaire body. Seals shall be a stable, non-degrading synthetic type, installed in a manner to provide a permanent seal. Locate clips of clamps within 150mm of the end of the refracting lens and at maximum spacing of 600mm. The fixing of the refracting lens shall not cause undue distortion of the luminaire body or diffuser.

Provide a facility to retain the refracting lens in the open position during servicing (i.e. lamp changing, cleaning). Provide a facility to hold the gear tray in the open position.

All replacement luminaires are to have a backplate of similar size to the existing luminaires so that remedial work to the ceiling or walls will be minimised or not required.

Existing luminaires in food preparation areas, such as canteens, Home Science rooms and kitchens, shall be replaced with new luminaires with square sides, fitted with electronic ballast(s), tri-phosphor lamps and prismatic diffuser, designed for use in food preparation areas. Any existing luminaire in food preparation areas fitted with three lamps is to be replaced with a new luminaire fitted with electronic ballast(s), two tri-phosphor lamps and prismatic diffuser.

### **3.3 FLUORESCENT LUMINAIRES WITH SPECULAR LOUVRES, RECESSED FLUORESCENT LUMINAIRES & TUBELIGHT LUMINAIRES**

The existing fluorescent lamp luminaires fitted with specular louvres, recessed fluorescent luminaires and tubelight luminaires are to be maintained in accordance with clause 3.20, and fitted with new components as detailed in clauses 3.13, 3.14 and 3.17. Any broken or missing tubelight lens or recessed luminaire diffuser is to be replaced. Replacement diffuser panels shall be of the prismatic diffuser (Y19, formerly known as K19) type. Replacement tubelight lens shall be to same type as those originally installed.

Lamps shall be easily replaced without the use of tools.

#### **Replacement Tubelight Lens**

Provide moulded or extruded refracting diffusers to achieve the required performance and glare control.

Diffusers shall be manufactured from high impact flexible acrylic material with integral end caps where necessary.

Attach diffuser/lens to the luminaire body with suitable guides to ensure the diffuser remains in the correct position, and securely retain by means of retaining clips or similar devices. Diffusers shall not be dislodged by impact from balls etc.

Diffusers shall be smooth on the outside.

Design the diffuser including selection of the diffuser material to ensure the outline of lamps, lampholders and body are softened at all viewing angles.

### **3.4 UPGRADED WEATHERPROOF AND VANDAL RESISTANT LUMINAIRES**

The existing fluorescent lamp surface mounted weatherproof and vandal resistant luminaires are to be maintained in accordance with clause 3.20, and fitted with new components as detailed in clauses 3.13, 3.14 and 3.17. Any missing or broken lens or gasket is to be replaced.

### **3.5 NEW VANDAL RESISTANT LUMINAIRES**

#### **Generally**

New vandal resistant luminaires (Type V) are to be supplied and installed with components as detailed in clauses 3.13, 0 and 3.17. These luminaires may replace existing luminaires that shall be removed or in addition to existing luminaires. Where they are additional to existing luminaires, they shall be supplied from existing lighting circuits. The vandal resistant weatherproof range (Type V) is to employ as standard either one or two 26mm diameter tubular fluorescent lamps without a reflector.

Type V luminaires are intended for use in areas exposed to weather and/or vandalism.

The intended applications for type V luminaires are:

- externally under flat or raked eaves:
- externally on vertical walls
- internally on ceilings and walls in wet areas and hostile areas that may be subject to vandalism.

Cable entry is to be via:

- On-site provision of a cable entry hole in the centre-back of the luminaire for entry of sheathed or unsheathed cable.
- Conduit entry into a threaded cable entry hole at one or both ends
- Round sheathed cable entry via a site installed cable gland in a threaded cable entry hole at one or both ends.

Provide each luminaire with at least 4ml of non-staining, non-setting mastic material suitable for use in a 50°C ambient, to seal the entry of cables through back of the luminaire against the ingress of moisture, dust and insects.

#### Performance

Required performance parameters are tabulated below:

Light Output Ratio – one-tube version	70% or greater
Light Output Ratio – two-tube version	65% or greater
Upward Component of Light Output	Not specified
Spacing to Mounting Height Ratio	Not specified
IP Rating	IP65

#### Construction

The body shall be rigid, strong with substantial mountings and shall be resistant to physical abuse, manufactured from cast aluminium or extruded aluminium. Aluminium shall be marine grade. All fittings are to be matching in appearance.

Polycarbonate bodies may be acceptable provided UV resistance, screw threading and maintenance of flexibility are demonstrated. Polycarbonate bodies to be available in white and grey colour

If the body is manufactured from either cast or extruded aluminium, two versions are required:

- raw aluminium finish, with surface treatment if necessary to achieve uniform appearance of all aluminium surfaces
- white powder-coated finish.

Lengthened luminaire bodies or a separate vandal resistant, weatherproof enclosure are permitted for emergency lighting equipment.

#### Strength Tests

- Suspend a bare 36W body upside down on two rectangular blocks, each 100 square and 200 long with spacing between the blocks of 1,000mm. The body shall not deflect more than 4mm under a load of 75kg centrally applied on a third block.
- Lay a diffuser upside down flat on a hard floor and loaded with 50kg at the centre. The diffuser shall not show any signs of cracking and shall return to shape.

- Assemble the diffuser and body and repeat test (a). Allowable deflection is 3mm.
- With the assembled luminaire on a hard floor with diffuser uppermost drop-test using a 4.5kg weight with a 45mm radius hemispherical face from a 1m height. The diffuser shall not show any signs of cracking and shall return to shape

### Diffuser

The diffuser shall be a one piece manufactured from UV stabilised high impact polycarbonate or high impact acrylic material.

Diffusers shall be smooth on the outside. Design the diffuser including selection of the diffuser material to ensure the outline of lamps and lampholders are softened at all viewing angles. This may be by addition of additive to the plastic material to make it less transparent and/or by treatment to obscure the inside surface of the diffuser.

Diffuser shall be attached to the body by at least four stainless steel fixing devices on 18W version and six on longer versions. Provide fixings with vandal resistant heads that require the use of a customised tool to remove the diffuser. Provide a one-piece gasket in a retaining groove in the body to provide a seal between mating surfaces of the diffuser and body that achieves the nominated IP rating for the design life of the luminaire.

## 3.6 NEW WEATHERPROOF FLUORESCENT LUMINAIRES

New weatherproof fluorescent luminaires are to be supplied and installed with components as detailed in clauses 3.13, 3.14 and 3.17. These luminaires may replace existing luminaires that shall be removed or in addition to existing luminaires. Where they are additional to existing luminaires, they shall be supplied from existing lighting circuits. Luminaires shall contain single or twin lamps rated at 18 or 36 Watts. The lamps shall be easily replaced without the use of tools. The luminaire shall be suitable for surface mounting or chain suspension. The luminaires shall have an ingress protection (IP) rating of 65 or greater.

### Performance

Required performance parameters are tabulated below:

Luminaire Type	Light Output Ratio
Weatherproof Fluorescent Luminaire fitted with twin 36 Watt lamps	65%

## 3.7 NEW BULKHEAD LUMINAIRES

New bulkhead incandescent luminaires are to be supplied and installed fitted with a 13 Watt compact florescent lamp. These luminaires may replace existing luminaires that shall be removed or in addition to existing luminaires. Where they are additional to existing luminaires, they shall be supplied from existing lighting circuits. Luminaires shall be supplied with a clear UV polycarbonate diffuser. The luminaires and the installation shall have an ingress protection (IP) rating of 65 or greater.

## 3.8 SPECIAL LINEAR FLUORESCENT LAMP LUMINAIRES

The existing special linear fluorescent lamp luminaires, including Tube Lights, are to be maintained in accordance with clause 3.20, and fitted with new components as detailed in clauses 3.13, 3.14 and 3.17. Any missing or broken lens or gasket is to be replaced.

## 3.9 BATTEN FLUORESCENT LUMINAIRES

The existing fluorescent lamp batten type luminaires are to be replaced with new batten type luminaires with components as detailed in clauses 3.13, 3.14 and 3.17. Luminaires shall

contain one or two lamps rated at 18, 36 or 58 Watts. The lamp shall be easily replaced without the use of tools. Batten type luminaires shall be hard wired into the existing lighting circuits. Some batten fittings shall be provided with diffusers or wire guards.

All replacement luminaires are to have a backplate of similar size to the existing luminaires so that remedial work to the ceiling or walls will be minimised or not required, e.g. narrow batten type luminaires, less than 65 mm wide for single lamp and 120 mm for twin lamp luminaires are NOT acceptable.

### 3.10 HIGH INTENSITY DISCHARGE (HID) LAMP LUMINAIRES

The existing high intensity discharge (HID) lamp luminaires, including Downlights, High Bay, Low Bay, Sphere or Cylindrical Diffusers and special types are to be maintained in accordance with clause 3.20, and fitted with new lamps of the same type and rating as the existing lamps.

### 3.11 LOCATION

The existing luminaire locations shall be maintained. The Contractor is to ensure the lighting systems for all areas exceed the Lighting Systems Performance Requirement as specified in clause 2. Additional luminaires may be provided, if required and at the Principal's Representatives written direction, to ensure the Lighting Systems Performance Requirements are met or exceeded.

### 3.12 NEW ENCLOSED FLUORESCENT LUMINAIRE PERFORMANCE

Replacement luminaires shall be of the high output types. Replacement luminaires shall have a minimum light output ratio as shown in the following table:

Luminaire Type	Light Output Ratio
Single Lamp	77.0% or greater
Single Lamp with Specular Reflector	83.0% or greater
Twin Lamp	65.0% or greater
Twin Lamp with Specular Reflector	85.0% or greater

The luminaire internal powder coated or painted reflective surfaces shall have a reflectance of greater than 85%.

The replacement luminaire will be type-tested for photometric data, in an approved NATA accredited laboratory. Results are to be submitted to the Principal's Representative for endorsement before any luminaires are manufactured. This data shall also be supplied in the MANUALS.

All new luminaires or luminaire components when assembled shall comply with AS 4051 - Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment. All new luminaires or new gear trays shall be clearly labelled with a C-tick Mark and associated Registration Label.

The surface mounted enclosed luminaires shall be designed to ensure the lamps operate at approximately their optimum operating temperature, i.e. 25°C, to achieve maximum light output with an ambient temperature of 22°C.

All equipment shall be designed for a nominal 240 voltage with the possibility of periods at 265 volts. The contractor may fit voltage regulators to sub-circuits.

All new luminaires shall have a power factor of 0.95 or higher.

New enclosed luminaires located in non food preparation areas shall be similar and equivalent to type E luminaires available on State Procurement Contract 969. New enclosed luminaires located in food preparation areas shall be similar and equivalent to Pierlite Unilux Profile Surface Mounted Prismatic luminaires.

### 3.13 FLUORESCENT LAMPS

#### Linear Fluorescent Lamps

All linear fluorescent lamps shall:

- Have a colour temperature of 4000K, be of the tri-phosphor type manufactured by a reliable supplier, such as NEC, Osram, Philips or Sylvania,
- Be guaranteed to be compatible with the electronic control gear,
- Have an economical life time of 18,000 hours or greater (90% or higher luminous flux from initial 100 hour value), then measured in accordance with EN 60081, annexe C, with electronic soft start control gear,
- Have a 10% drop, or less, in luminous flux after 18,000 operating hours.

Linear fluorescent lamps shall be of the following type:

- T8 (26mm diameter) type with rating of 58 Watt, output of 5,200 lumens at 25°C and nominal length of 1,500mm.
- T8 (26mm diameter) type with rating of 36 Watt, output of 3,350 lumens at 25°C and nominal length of 1,200mm.
- T8 (26mm diameter) type with rating of 18 Watt, output of 1,350 lumens at 25°C and nominal length of 600mm.

#### Compact Fluorescent Lamps

Replace incandescent GLS lamps with Compact Fluorescent Lamps. Compact Fluorescent Lamps are to have an average life of at least 6,000 hours. The Base is to match the existing incandescent lamps (BC- Bayonet Cap or ES – Edison Screw). Colour temperature to be Warm White (3000K) or Cool White (4000K).

Lamps to be rated as follows:

Incandescent Lamp Wattage	Replacement Compact Fluorescent Lamp Wattage
40 Watts	7 or 8 Watts
60 Watts	11, 12 or 13 Watts
75 Watts	14 or 15 Watts
100 Watts	18 or 20 Watts

### 3.14 FLUORESCENT LAMP BALLASTS

All fluorescent lamp ballasts shall be of the high frequency electronic type manufactured by a reliable supplier, such as Osram, Philips or Tridonic.Atco. Electronic ballasts shall have a designed mean service life of 50,000 hours at a maximum ambient temperature of 55°C or higher. Electronic ballasts shall be of the soft start type with a start time of less than 2 seconds. Instant start types will not be accepted.

Twin lamp luminaires and retrofit kits shall be fitted with two ballasts, one per lamp.

Ballasts for linear lamp luminaires shall comply with Energy Efficiency Index (EEI)-Class A2 at a Ballast Lumen Factor (BLF) of 1.0 and the circuit power shall not exceed the power as shown in the following table at 240Volts:

Lamp Wattage	Circuit Power (Watts)
2 x 58 Watts	110.0
1 x 58 Watts	55.0
2 x 36 Watts	72.0
1 x 36 Watts	36.0
2 x 18 Watts	38.0
1 x 18 Watts	19.0

Provide electronic ballasts with the following features:

- Full compliance with AS 3134, AS/NZS 4783.1, AS/NZS 4783.2, AS/NZS 60921, AS/NZS 60928 and AS/NZS 60929
- Lamp cathode heating cut-off technology.
- Soft-start of lamps, nominal delay 1 – 1.9 seconds.
- Automatic shutdown on faulty lamps.
- Operating ambient temperature range -10°C to +55°C or higher.
- Power factor between 0.95 lagging and 0.8 leading.
- Mains voltage/frequency: 240V +or - 10% -50Hz.
- Operating frequency 30kHz - 50kHz.
- Provide one ballast per lamp in twin lamp luminaires.
- Total harmonic distortion of less than 10%.
- Protection against short duration voltage surges and transient over voltage.
- Circuitry for immunity against excessive voltage transients and harmonics.

### 3.15 REFLECTORS

Aluminium and silver film reflectors shall have a total reflectance of greater than 94%. Reflectors can be constructed of aluminium or silver film with a 10 year warranty against surface deterioration leading to a reduction of reflective performance. Highly reflective white paint with a total reflectance of 90% or higher may be used on reflective surfaces in lieu of aluminium and silver film reflectors only if the required luminaire Light Output Ratio can be achieved without the use of aluminium and silver film reflectors. Refer to clause 3.12.

Soft cotton gloves shall be worn when handling aluminium and silver film reflectors.

The Contractor shall measure illuminance levels in all areas after completion of the upgrades and after written agreement with the Principal's Representative, add specular reflectors to

luminaries in the area where the artificial lighting illuminance level is less than 300 lux after the upgrade.

### 3.16 REFRACTING LENS

The lens shall be of the totally enclosing wrap around type with prismatic refracting material on the underside and linear refracting material on all four vertical sides. Construct from UV stable clear high impact flexible clear virgin acrylic.

The lens construction shall be either:

- one piece injection moulded, or
- injection moulded with end pieces fixed to the main diffuser extrusion, by solvent-gluing or ultrasonic welding. Produce and assemble all diffusers to strict dimensional tolerances to ensure a stable and uniform lens assembly.

### 3.17 FLUORESCENT LAMP HOLDERS

Fluorescent lamp holders shall be medium bi-pin locking type suitable for the 26mm lamp as appropriate.

The lamp holder body shall be semi-rigid 105°C continuous rated flame retardant plastic and the locking button shall be rigid 130°C reinforced flame retardant plastic.

All electrical connection surfaces to lamp holders shall be silver plated, copper or phosphor bronze.

### 3.18 TERMINAL BLOCKS

Provide terminal blocks to accept incoming sub-circuit wiring, as follows:

- Insulated tunnel type rated minimum 240Volt 30 Amp. Fix securely in place, but not by the normal earthing tongue.
- Four (4) tunnels to provide earth, neutral, active and unswitched active/looping termination. Label or code each tunnel for ready identification by the installing electrician.
- Brass conducting parts with conductor clamping effected by captive pressure plate. Standard concave based screws are not acceptable.
- Semi-rigid plastic insulation and body, with insulating skirt extending min. 5mm beyond terminal entries.
- Non-restricted tunnel cable entry not less than 5mm inside dia., and sized to accept three 2.5 sq.mm copper building wires per tunnel, with termination screws at not less than 12mm centres.

Terminals, wiring and equipment for emergency lights shall comply with the requirements of SAA Wiring Rules AS/NZS 3000:2007, particularly the segregation requirements.

### 3.19 EXISTING WIRING

The contractor shall use the existing wiring system in the building. The contractor shall also provide new wiring, conduit and sockets, as required, to any additional luminaires required from existing circuits. The use of double adaptors is prohibited.

### 3.20 MAINTENANCE OF UPGRADED LUMINAIRES

Luminaires that are upgraded or fitted with retrofit kits shall be maintained as follows:

- Replace lamp holders that comply with clause 3.17;
- Replace the control gear with electronic ballasts that comply with clause 3.14;
- Replace all broken clips and broken hinges in all surface mounted enclosed luminaires;
- Replace linear fluorescent lamps that comply with clause 3.13;
- Replace any broken or damaged diffusers, lenses that comply with clause 3.16 or gaskets;
- Replace any broken or damaged terminal blocks that complies with clause 3.18
- Add specular reflectors that comply with clause 3.15, after receiving the Principal's Representative written permission to proceed, to luminaires where the artificial lighting illuminance level is less than 300 lux after the upgrade;
- Clean the inside, thoroughly clean reflective surfaces, and clean the outside of luminaire; and
- Wash both sides of any diffuser, or lens, and reflector with a non ionic and non corrosive solution, drip dry and replace using cotton gloves;

Refer to AS/NZS 1680.1 Section 12, AS/NZS 2293.2:1995 and AS/NZS 2293.2:1995/Amdt 1-1998 for additional details.

### 3.21 LUMINAIRES TO BE REPLACED, UPGRADED OR MAINTAINED

Only luminaires contained in schedules that will be issued to the contractor are to be Replaced, Upgraded or Maintained.

Luminaires that have recently been upgraded or replaced are **not** to be Replaced, Upgraded or Maintained. This includes all luminaires that are fitted with electronic or switch start control gear.

Emergency and exit lights are not included in this project.

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## 4 ADDITIONAL REQUIREMENTS

### 4.1 PASSIVE INFRA-RED LIGHT CONTROLLER (PIRL)

REQUIREMENT: Optional requirement to install an infra-red detector in areas as directed by the Principal's Representative. The detector is to control:

the lights in that particular room or area,

One light fitting in each area should not be controlled by the controller, and to stay ON even when the PIR have turned the lights OFF. In some areas a contactor maybe required to control the lighting.

The need for a contactor is at the discretion of the Contractor.

POWER SUPPLY: 250V a.c.

**MINIMUM LOAD CAPACITY:** 2,000 VA, 3 wires. A contactor, mounted in a PVC enclosure with a clear lid, of suitable rating shall be provided where the load exceeds the switching rating of the PIR.

**DETECTION METHOD:** Passive infra-red detection of thermal radiation.

**OPERATION:** When the area light switch is ON, the PIR will switch luminaires ON as it detects persons arriving and OFF 20 minutes after it ceases to detect a person in the area. While the PIR detects that a person is present, the luminaires will remain switched ON without interruption. When the area light switch is OFF, the PIR will not automatically switch lights ON.

**POSITION:** Locate PIR to sense a person within 1 to 1.5 meters of entering the area. Also to sense a person within the normal workplace or normal circulation space within the area.

**TYPE:** Similar to Clipsal, cat. No. 750WP/R

**TIME DELAY:** Fully variable within a timing range of 5 seconds to 20 minutes.

**LIGHT ADJUSTMENT:** Set the "Light Adjustment" so that the lights do not turn on when the lighting level in the room is adequate.

**AMBIENT LIGHT LEVEL ADJUSTMENT:** Full sunlight to darkened room.

**DETECTION RANGE:** PIRL - 18 meters.

**MOUNTING HEIGHT:** Optimum 2400mm above floor level.

**ENCLOSURE:** Impact resistant with International Protection Rating IP66.

**LABELS:** Fix W/B/W laminated plastic labels adjacent to each existing light switch where PIR will be installed, with the following text (lettering shall be 4mm high for headings and 3mm high for subsequent text):

Headings for controlling lights only in the room:

### **AUTO LIGHTING CONTROL**

Subsequent text:

**Infra-Red motion detection**

**Switch ON/OFF manually, or**

**Leave switch ON & lights will switch ON/OFF automatically**

**(20 mins OFF delay)**

## **4.2 ELECTRO-MECHANICAL TIMER (EMT)**

**REQUIREMENT:** Optional requirement to install an Electro-Mechanical Timed Switch (2 stage) on lighting loads in areas as directed by the Principal's Representative. The purpose of the timers is to limit the amount of energy used by automatically switching loads OFF periodically. The existing switches shall be maintained and timers installed adjacent to the switch.

**TYPE:** Clockwork movement with 2 x 12.5amp (3000 VA) contacts, with one contact to break 10 minutes before zero and the remaining contact to break at zero. Equivalent of the "Energy Saver" as manufactured by RE Developments Company, Tel: (02) 9686 6771 & Fax: (02) 9688 7606 & Mobile: 0407 705 869. A contactor mounted in a PVC enclosure with a clear lid, shall be provided where the load exceeds the switching rating on the EMT.

EMT120L = 120 minute range for lighting

**CONSTRUCTION:** White impact resistant PVC with face engraved in clock-face style to show minutes, time elapsed and so that variable time settings may be achieved.

**MOUNTING:** The timer to be mounted adjacent to the system's existing ON/OFF control switch plate.

**WIRING FOR LIGHTING CONTROL:** Where the existing room light circuit has more than one (1) switch wire, split the switch wires over the timer's "10 minute early break" contact and the "break at zero" contact. This will ensure that lights switch OFF gradually. Otherwise, install an extra switch wire, then split the switch wires over both contacts to achieve gradual switch OFF.

**LABELS:** Fix W/B/W laminated plastic labels adjacent to each timer with the following text (lettering shall be 4mm high for headings and 3mm high for subsequent text):

Headings: Subject to the relevant application

**Lighting Timer**

**Set for required time**

**When leaving: Switch off**

#### **4.3 REMOVAL OF CAPACITORS CONTAINING PCB**

Capacitors containing PCB shall be removed from all luminaires and control boxes by the Contractor.

A recommended general reference tool on PCB's, and to assist in the identification of capacitors containing PCB, is the booklet titled: "*Identification of PCB Containing Capacitors*". This booklet written specially for electrical contractors, is published by the Australian and New Zealand Environment and Conservation Council (ANZECC) and is available FREE of charge from Environment Australia who can be contacted on 'phone: 1800 803 772 (bus. hours). Alternatively the booklet is available through National Mailing & Marketing: fax: 02 6299 6040.

Capacitors identified as containing PCB in the ANZECC booklet and capacitors not listed in the ANZECC booklet will be removed, stored and disposed of according to instructions contained in the ANZECC booklet.

The waste transport contractor used for disposal shall be listed in Appendix III at: <http://www.environment.gov.au/settlements/publications/chemicals/scheduled-waste/pubs/pcb-id-appendices.pdf>

The Contractor will provide to the Principal's Representative written proof, from the transporter, confirming proper disposal of all removed capacitors.

#### **4.4 EQUIPMENT SPECIFICATIONS AND DESIGN DATA**

The Contractor shall forward to the Principal's Representative the following:

- A certified test report from a NATA accredited laboratory of all the replacement enclosed type luminaires used in the lighting upgrade that includes the light output ratio, luminaire power, intensity data and summary, uniformity diagram and comments on any uncertainties.
- Calculations of expected maintained lux levels on desktops with the existing luminaire locations for all the classroom, office, laboratory and conference room areas. For the purpose of calculating maintained illumination levels, the following data shall be used:

- height from the ceiling to the working plane, 2.0 metres,
  - reflection factor of the ceiling, 70%,
  - reflection factor of the walls, 50%,
  - reflection factor of the floor, 20% and,
  - maintenance factor of 0.8.
- Glare index calculations for all areas using the height and reflection factors from above, the data contained in the certified test report and the lamp lumen output specified in clause 3.13.

#### 4.5 WORKS PROGRAM

Within 7 days of the acceptance of the tender, the contractor shall submit a program detailing the design, manufacture, supply, delivery to site, installation and commissioning of this section of the works.

#### 4.6 INSPECTION

Acceptance testing: Notify the Principal's Representative that the installation is ready for acceptance only after the Quality Assurance Inspection and Testing reports as detailed in the Inspection & Testing are filled with "Yes" answers. Minimum notice required is 5 working days.

#### 4.7 MANUALS

##### REQUIREMENT

Before the date of Practical Completion, the contractor shall provide three copies of the Operating and Maintenance Manual and forward to the Principal.

Manuals shall contain to following items:

- Table of Contents;
- Project Directory that includes contact details of the Consultants, Principal's Representative, Contractor and luminaire manufacturer;
- Technical Description of the project;
- Material Specifications including technical brochures of every item supplied in the contract;
- All documentation specified in clause 4.4, Equipment Specifications and Design Data above;
- Report of illuminance levels in all areas after completion of the upgrades in accordance with Appendix B of AS/NZS 1680.1-2006. The Principal may also request optional recording of digital images at the completion of the projects
- Copies of Notification of Electrical Work;
- Drawings of all luminaires supplied and;
- Copies of distribution board schedules if changes have been made.

Preference is for A4 size, printed or typed on durable printing paper, with each page consecutively numbered, and neatly bound in durable vinyl or similar hard covers.

The Contractor shall also forward copies of all electronic files contained in the manuals on a CD to the Principal's Representative.

#### 4.8 CLEANING UP

All visible external and internal surfaces, including luminaires and the ceiling, must be free of marks, dirt, dust, vermin and unwanted materials, at Completion. The contractor shall remove dirt from the luminaire when a retrofit kit is installed.

The Contractor will provide and place protective covers over all work areas, workstations and desks. The Contractor shall clean up the work areas daily or immediately work has finished in that area for the day. Each work area shall be vacuumed to collect dirt and dust.

All areas that work has been undertaken in the previous 24 hours shall be cleaned and inspected by the contractor before 8 am of that day. The Principal's Representative may also carry out an inspection. The completed work will not be accepted unless these inspections are satisfactory.

#### 4.9 SAMPLE LUMINAIRES

Provide one of each type of new and replacement luminaires to the Principal for approval. Allow one week for the Principal to approve or advice of non compliance. No orders shall be placed until approval of each type of luminaire has been received from the Principal. Approved samples shall be retained by the Principal.

#### 4.10 OPTIONAL RECORDING OF COMPLETED INSTALLATION

The tenders shall provide a rate for optional recording of digital images of each room in each building where fittings have been replaced or upgraded in the Schedule of Rates for Variations. Images shall be nominally 1MB or greater in size. Images shall generally be created at the door or entrance to the room and cover as many of the luminaires as possible.

Two DVDs of all images shall be forwarded to the Principal upon completion of the projects. Each file, in jpg format, shall be named and include the respective school name, building and room number, e.g. "Figtree HS AR0001".

### 5 STANDARDS

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#### 5.1 REFERENCED DOCUMENTS:

Lighting systems and components must comply with the following standards:

Australian Standard AS 1680.0:1998	Interior lighting – Safe movement
Australian Standard AS 1680.1:2006	Interior and workplace lighting – General principles and recommendations
Australian Standard AS 1680.2.1:1993	Interior lighting – Circulation spaces and other general areas
Australian Standard AS 1680.2.2:1994	Interior lighting – Office and screen based tasks
Australian Standard AS 1680.2.3:1994	Interior lighting - Education and training facilities
Australian Standard AS 2293.1:2005	Emergency escape lighting and exit signs for buildings – System design, installation and operation
Australian Standard AS 2293.3:2005	Emergency escape lighting and exit signs for buildings – Emergency escape lighting and exit signs
Australian Standard AS 2560.1:2001	Sports lighting – General principles

### 3. TECHNICAL SPECIFICATION

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Australian Standard AS 2560.2.2:1986	Guide to sports lighting – Specific recommendations - Lighting for multipurpose indoor sports centres
Australian Standard AS/NZS 3000:2007	Wiring Rules
Australian Standard AS/NZS 3008.1.1:1998	Electrical installations - Selection of cables
Australian Standard AS/NZS 4782.2:2006	Double-capped fluorescent lamps - Performance Specifications - Minimum Energy Performance Standard (MEPS)
Australian Standard AS/NZS 4783.2:2002	Performance of electrical lighting equipment - Ballasts for fluorescent lamps - Energy labelling and minimum energy performance standards requirements
Australian Standard AS/NZS 60928:2000	Auxiliaries for lamps - AC supplied electronic ballasts for tubular fluorescent lamps - General and safety requirements
Australian Standard AS/NZS CISPR 15:2006	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.

## 6 AUTHORITIES' APPROVALS

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### REQUIREMENTS

Documents evidencing approval of regulatory authorities, to be provided before practical completion or other specified dates.

### WORKS BY AUTHORITY

If the responsible authority, pursuant to statutory powers vested in it, elects to perform or supply part of the Works, make the necessary arrangements with the authority.

### SUPPLY AUTHORITY REQUIREMENTS

Provide the works required by the supply authority to complete the electrical services installation, include the installation of equipment supplied by the authority.

### FEES

Pay any fee lawfully imposed by Supply Authority for inspection.

## 7 TESTING AND COMMISSIONING

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### NOTICE

The contractor shall give sufficient notice so the Principal's Representative may witness tests. Minimum notice required is 5 working days.

### NOTIFICATION OF ELECTRICAL WORK

Before the date of Practical Completion, the contractor shall give provide one copy of each "Notification of Electrical Work" as submitted to the Electricity Distributor.

## **SITE TESTING**

The contractor shall perform functional checks including spot lux level measurements.

## **FAULTY INSTALLATION**

During testing, the contractor shall replace all equipment damaged as a result of incorrect installation work.

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## **8 ACCESSORIES**

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### **8.1 ACCESSORIES STANDARDS**

#### **GENERALLY**

To AS /NZS 3000:2007.

### **8.2 POSITIONING OF CONTROL DEVICES**

Locate all controls in a position that is practical and affords easy access when required.

### **8.3 ACCESSORIES INSTALLATION**

**MOUNTING GENERALLY:** Accessories will be generally surface-mounted, unless directed to be flush-mounted for special circumstances. Unless otherwise indicated, such circumstances are expected to occur at maximum of 10% of all accessory installation points. For surface mounting use standard, proprietary mounting blocks wherever available.

**RESTRICTED LOCATION:** Do not install wall boxes across the junction of wall finishes.

**FIXING:** Use corrosion resistant fixings for external locations. Avoid fixing to hollow blocks. Where approved, use M5 electro-galvanised, round head screws and spring loaded butterfly toggles for fixings to hollow section.

**MOUNTING BLOCKS:** Fix mounting blocks with four screws in accordance with Fixing in Conduits, Generally - Electrical Services. Use one of the following fixings to suit the surface:

- **Steel wood screw, No. 8, countersunk, cadmium plated, or**
- **No. 8, electro-galvanised, binding head, self tapping, or**
- **M5, round head, cadmium plated.**

**SURFACE MOUNTING DUCTING:** Unless otherwise specified, use surface mounted ducting in accordance with OTHER WIRING ENCLOSURES.

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## **9 MOUNTING**

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### **NOGGINGS**

Where required for fixing, provide noggings of similar size to the timber joists, and of minimum size 75x50 mm.

### **PACKING**

Where required, packing of approved material to level the luminaires and to prevent distortion.

### **FIXING**

Provide fixings into structural members of ceilings or walls. Do not fix fitting to junction boxes.

### **MINIMUM SIZE**

The minimum size of fixing for luminaires, hangers, or brackets for various surfaces is as follows:

- To timber: Steel wood screw No. 10 x 25mm, round head, cadmium plated.
- To concrete: Approved screw expanding bolts M5 x 40mm
- To hollow blocks: M5 electro galvanised, round head screws with spring loaded butterfly toggles.

Where a deep cast iron junction box is provided in the building, use M5 metal screws with approved expanded fixings at each end.

### **ALL FIXINGS**

Fit with large diameter (minimum 3 x screw dia.) cadmium plated washer under the head of each screw.

### **SURFACE MOUNTED FLUORESCENT LUMINAIRES**

Provide minimum two fixings near each end.

### **SURFACE MOUNTED NARROW LUMINAIRES**

For fittings less than 100mm wide provide one fixing near each end

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## **10 CABLES**

### **10.1 CABLE INSTALLATION**

#### **REQUIREMENT**

All cables and cable enclosures to be concealed unless approved by the Principal's Representative.

### **10.2 CABLE MANUFACTURE**

#### **STANDARDS**

Conductors:

To AS 1125

Selection of Cables:

To AS/NZS 3008.1

### **10.3 CABLE SELECTION**

#### **STANDARDS**

To AS/NZS 3000:2007 and AS/NZS 3008.1. To AS 3012 for construction and demolition sites.

## **RATINGS**

Unless otherwise specified use AS/NZS 3008.1 for the determination of current ratings and voltage drop.

## **CONDUCTORS**

Minimum size: to AS/NZS 3000:2007. Unless otherwise specified, and where available, use multi-stranded copper conductors.

## **CONTROL CIRCUITS CONDUCTORS**

Copper, minimum size: 1.5 mm<sup>2</sup>

## **PVC INSULATED CABLES**

Unless otherwise specified use V75 insulation.

# **10.4 CABLE INSTALLATION**

## **STANDARDS**

To AS/NZS 3000:2007 and AS 3013.

To AS 3012 for construction and demolition sites. To AS 3013 for specific application.

## **REQUIREMENT**

All cables and cable enclosures to be concealed unless approved by the Principal's Representative

TPS cables may be used in the concealed suspended ceiling space.

All surface run cables to be enclosed in metal or PVC wiring duct.

## **MANUFACTURERS' RECOMMENDATIONS**

Unless otherwise specified, install, terminate and joint cables in accordance with manufacturers' recommendations.

## **HANDLING CABLES**

Handle cables so as to avoid damage to insulation and serving or sheathing. Report all damage and replace or repair damaged cable as directed.

## **STRAIGHT THROUGH JOINTS**

Unless unavoidable due to length or difficult installation conditions, run cables for their entire route length without intermediate straight-through joints. Locate approved joints as directed.

## **CONDUIT DROPS**

For surface or concealed wiring in TPS cables to switches, outlets and similar terminations, provide conduit drops originating at an accessible point in the roof space.

## **TPS CABLING**

Install TPS cabling so that it may be fully replaced.

TPS cabling to be attached to the underside of the floor slab or a building structure member and not attached or laid on the ceiling grid.

## CONDUCTORS

Colours: For fixed wiring colour the conductor insulation or, if this is not practicable, slide not less than 150 mm of close fitting coloured sleeving to each conductor at the termination points as follows:

- Active conductors in single phase circuits: RED
- Switched active conductors to fittings: WHITE
- Other conductors: To AS/NZS 3000:2007
- Sheathing colour: White for flat TPS, Orange for circular cables.

## DRAW-IN SYSTEM

Carry out sub-circuit wiring in "Draw-in, Loop-in" system for both TPI and TPS cables. No intermediate connections to be made except for TPS cables where looping terminals may be used at switches, lighting fittings, etc.

### 10.5 SINGLE INSULATED WIRING IN CONDUIT

#### REQUIREMENT

Complete and permanently fix the conduit run before installing the wiring. Use draw wires to pull in the conductor groups from outlet to outlet.

#### JUNCTION BOXES

Do not make conductor joints in through runs of cables unless approved. Install boxes containing joints in accessible locations.

#### VERTICAL RUNS

For vertical conduit runs in excess of 15 m make adequate provision for supporting the weight of the wiring to avoid insulation damage.

#### DAMAGED INSULATION

Replace all wiring in conduits containing conductors with insulation damaged during installation, after determining and removing the cause of damage.

### 10.6 COPPER CONDUCTOR TERMINATIONS

#### REQUIREMENT

Terminate wiring in tunnel type connectors.

Small accessory and luminaires: Terminate wiring in tunnel type connectors.

Stud or pillar connections: Prevent stranded conductors from spreading. Twisting multi-stranded conductors is not considered adequate.

Ross Courtney terminations: May be used on conductors up to 4 mm<sup>2</sup>.

#### RESTRICTIONS

Do not use forked type cable lugs that spread on tightening down.

#### CONNECTION TO CIRCUIT BREAKERS

Double the conductors back in "Open Loop" form for connection of single strand conductors to tunnel terminals on circuit breakers.

## **WITHIN SWITCHBOARDS AND EQUIPMENT**

Loom and lace together, with PVC straps or string, all conductors from within the same cable or conduit from the point of cable sheath or conduit termination to the terminal block. Neatly bend each conductor to enter directly into the terminal tunnel or terminal stud section, allowing sufficient slack for easy disconnection and reconnection.

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## **11 CONDUITS AND CABLE SUPPORTS**

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### **11.1 CONDUITS GENERALLY**

#### **STANDARDS**

Non-metallic conduits and fittings to AS 2053. Installation to AS/NZS 3000:2007.

#### **MINIMUM SIZES**

Non-metallic conduits: 20 mm

#### **COLOUR**

For exposed conduit, paint to match surroundings using minimum of undercoat plus two coats of paint of matching colour.

#### **FIXINGS**

For 20, 25 and 32mm dia. conduits: Use one of the following fixings:

- To masonry, concrete and cement rendered walls: Steel wood screw No. 8 x 25mm, round head, cadmium plated, into 25mm long metallic plugs.
- To plastered walls: The same fixing as for masonry. However, the metallic plugs shall be 25mm minimum into the masonry and screws shall be of sufficient length to allow for the plaster thickness, e.g. for 20mm thick plaster, use 44mm long screws.
- To timber: Where directly fixed, steel wood screw No. 8 x 20 mm, round head, cadmium plated. where fixed through fibreboard plasterboard, etc., the screws shall be of sufficient length to allow for the additional thickness.
- To sheet metal: No. 8x13mm long, electro galvanised binding head, and self-tapping screws.
- To steel: M5 cadmium plated, round head screws of appropriate length tapped or bolted.

#### **CONDUIT SYSTEM**

Unless otherwise specified, conceal all conduits. Install conduits in "draw in, loop in" system. Complete conduit system before wiring is drawn in. Do not use elbows and tees in inaccessible locations.

#### **SUPPORT**

Unless otherwise specified, fix conduit saddles at a maximum of 1m intervals in horizontal runs and 2m intervals in vertical runs. Ensure that installed conduits are fully supported during construction.

#### **PROTECTION IN ROOF SPACE**

Protect UPVC conduits installed in accessible roof spaces and the like by timber battens.

#### **LENGTHS**

Up to the commercially obtainable conduit lengths of run, install conduits without joints. Remove all rags, burrs, and sharp edges from each length before completing each conduit joint.

Fit moulded plastic screwed bushes to the free ends of metallic conduit runs before installing the conductors.

### **DRAW-IN BOXES**

Provide draw-in boxes at suitable intervals not exceeding 30 mm in straight runs, and at intervals not exceeding 25m in other runs including directional changes.

## **11.2 NON-METALLIC CONDUITS AND FITTINGS**

### **TYPE**

Unless otherwise specified, use heavy duty type Associated fittings shall be of the same material as specified for the conduit.

Light duty UPVC conduits: These conduits may be used in concealed space, in slabs or in other areas not exposed to mechanical damage.

### **COLOUR**

For exposed conduit, paint to match surroundings.

### **CONDUITS EXPOSED TO DIRECT SUNLIGHT**

In locations exposed to direct sunlight use conduits and fittings of a type specially treated for such use.

### **JOINTS**

Use cemented joints. Adopt the manufacturer's recommended procedure for making joints.

### **WALL BOXES**

Standard size wall boxes shall be of the same material as the conduit. Where special size boxes are specified, and where such boxes are not obtainable in UPVC, use pre-fabricated metal boxes.

### **CONDUIT ENTRIES**

Fix conduits to wall boxes, draw-in boxes, switchboards, luminaires etc. with screwed PVC adaptors and lock nuts, unless conduits can enter wall boxes via a moulded conduit entry. An approved grommet system may be used for conduit entry to metal boxes and switchboards.

### **FITTINGS**

Use inspection-type fittings in accessible and exposed locations.

### **CONDUIT SETTING**

Where practicable have conduits performed by the manufacturer. At site, use correctly sized springs to form set in UPVC conduit. Bends shall be of large radii and, after setting, shall maintain effective diameter and shape. Reject conduit sets distorted by kinks, wrinkles, flats or heating.

### **MECHANICAL DAMAGE**

In situations where the conduit is exposed to mechanical damage and external to buildings, provide mechanical protection to UPVC conduit for a height of not less than 3 m above ground or platform level.

## **11.3 FLEXIBLE CONDUIT**

### **TYPE**

Use PVC flexible conduit with associated fittings unless otherwise specified.

Colour: For exposed conduit, paint to match surroundings.

### **USE**

In addition to its use on expansion joints, fit flexible conduit to equipment and plant subjected to vibration or where necessary for adjustment or ease of maintenance.

### **LENGTH**

The maximum length of a flexible conduit connection shall be 600 mm.

## **11.4 OTHER WIRING ENCLOSURES**

### **DUCTING.**

Use proprietary type, of either metal or PVC.

### **COLOUR**

For exposed duct, paint to match surroundings using minimum of one coat of undercoat plus two coats of paint of matching colour.

### **MATERIAL**

Ductings and covers must be robustly constructed from heavy gauge material to avoid sagging between supports and warping.

### **ASSOCIATED FITTINGS**

Provide associated fittings of similar material.

### **COVERS**

Use screw-fixed covers, unless installed in a location not readily accessible, where clip-on lids may be used. Covers must be easily removable.

### **FIXING**

Fixing methods must provide a smooth internal surface from the cables. Do not use self-tapping screws.

### **ENTRIES**

Round off sharp edges and provide PVC bushes or the like for cable entries into metallic ducting.

### **SUPPORT**

Rigidly support the duct in all locations.

### **CABLE SUPPORT**

Support the wiring by retaining clips at intervals not exceeding 1 m except where ducts are run horizontally with covers uppermost.

### **METAL DUCTS**

Minimum 0.8 mm thick and free from dags, burrs and sharp edges.

**END OF SECTION – TECHNICAL SPECIFICATION**

## 4 SCHOOL SCHEDULES

Region Name	Entity1_Name	Item_Type	Luminaire Type on Site	Existing Quantity	Upgrade Quantity
Illawarra and South East	Figtree High School	Batten	1x20W Batten	3	2
Illawarra and South East	Figtree High School	Batten	1x20W Batten with diffuser	1	2
Illawarra and South East	Figtree High School	Batten	1x40W Batten	31	5
Illawarra and South East	Figtree High School	Batten	1x40W Batten with diffuser	1	34
Illawarra and South East	Figtree High School	Batten	2x20W Batten with diffuser	1	2
Illawarra and South East	Figtree High School	Batten	2x40W Batten	12	0
Illawarra and South East	Figtree High School	Batten	2x40W Batten with diffuser	0	11
Illawarra and South East	Figtree High School	Incandescent	Incandescent Bulkhead	33	33
Illawarra and South East	Figtree High School	Incandescent	Incandescent Lamp	23	23
Illawarra and South East	Figtree High School	Recessed	2x40W Recessed	17	17
Illawarra and South East	Figtree High School	Surface Mounted	1x20W Surface Mounted with End Caps	11	11
Illawarra and South East	Figtree High School	Surface Mounted	1x40W Surface Mounted Type E	8	8
Illawarra and South East	Figtree High School	Surface Mounted	1x40W Surface Mounted with End Caps	58	43
Illawarra and South East	Figtree High School	Surface Mounted	2x20W Surface Mounted with End Caps	3	3
Illawarra and South East	Figtree High School	Surface Mounted	2x40W Surface Mounted Type E	103	100
Illawarra and South East	Figtree High School	Surface Mounted	2x40W Surface Mounted Type E with Square sides	0	27
Illawarra and South East	Figtree High School	Surface Mounted	2x40W Surface Mounted with End Caps	535	480
Illawarra and South East	Figtree High School	Surface Mounted	2x65W Surface Mounted Type E	59	57
Illawarra and South East	Figtree High School	Surface Mounted	3x40W Surface Mounted with End Caps	174	172
Illawarra and South East	Figtree High School	Vandal Resistant	1x20W Vandal Resistant	6	27
Illawarra and South East	Figtree High School	Vandal Resistant	1x40W Vandal Resistant	4	15
Illawarra and South East	Figtree High School	Vandal Resistant	2x40W Vandal Resistant	2	2
Illawarra and South East	Figtree High School	Weatherproof	1x20W Weatherproof	68	49
Illawarra and South East	Figtree High School	Weatherproof	1x40W Weatherproof	1	1

4 SCHOOL SCHEDULES

Region Name	Entity1_Name	Item_Type	Luminaire Type on Site	Existing Quantity	Upgrade Quantity
Illawarra and South East	Nowra High School	Batten	1x20W Batten	7	5
Illawarra and South East	Nowra High School	Batten	1x20W Batten with diffuser	0	2
Illawarra and South East	Nowra High School	Batten	1x40W Batten	6	4
Illawarra and South East	Nowra High School	Batten	1x40W Batten with diffuser	10	12
Illawarra and South East	Nowra High School	Batten	1x65W Batten	3	2
Illawarra and South East	Nowra High School	Batten	1x65W Batten with diffuser	0	1
Illawarra and South East	Nowra High School	Batten	2x40W Batten with diffuser	2	2
Illawarra and South East	Nowra High School	Batten	2x65W Batten	2	2
Illawarra and South East	Nowra High School	Florescent	Compact Florescent	12	12
Illawarra and South East	Nowra High School	HID Sphere	HID Sphere	47	47
Illawarra and South East	Nowra High School	Incandescent	Incandescent Lamp	15	15
Illawarra and South East	Nowra High School	Recessed	2x40W Recessed	8	8
Illawarra and South East	Nowra High School	Surface Mounted	1x20W Surface Mounted Type E	7	7
Illawarra and South East	Nowra High School	Surface Mounted	1x20W Surface Mounted Type E with Square sides	38	38
Illawarra and South East	Nowra High School	Surface Mounted	1x20W Surface Mounted with End Caps	2	2
Illawarra and South East	Nowra High School	Surface Mounted	1x40W Surface Mounted Type E	27	27
Illawarra and South East	Nowra High School	Surface Mounted	1x40W Surface Mounted with End Caps	13	13
Illawarra and South East	Nowra High School	Surface Mounted	1x65W Surface Mounted Type E	10	10
Illawarra and South East	Nowra High School	Surface Mounted	2x20W Surface Mounted Type E	2	2
Illawarra and South East	Nowra High School	Surface Mounted	2x20W Surface Mounted with End Caps	16	16
Illawarra and South East	Nowra High School	Surface Mounted	2x40W Surface Mounted Type E	33	33
Illawarra and South East	Nowra High School	Surface Mounted	2x40W Surface Mounted with End Caps	96	96
Illawarra and South East	Nowra High School	Surface Mounted	2x65W Surface Mounted Type E	223	219
Illawarra and South East	Nowra High School	Surface Mounted	2x65W Surface Mounted Type E with Square sides	0	4
Illawarra and South East	Nowra High School	Surface Mounted	2x65W Surface Mounted with End Caps	158	158
Illawarra and South East	Nowra High School	Surface Mounted	3x40W Surface Mounted Type E	4	4
Illawarra and South East	Nowra High School	Surface Mounted	3x40W Surface Mounted with End Caps	34	34
Illawarra and South East	Nowra High School	Surface Mounted	3x65W Surface Mounted Type E	6	6
Illawarra and South East	Nowra High School	Suspended	1xMV Suspended Cylindrical	55	55
Illawarra and South East	Nowra High School	Tubelight	2x40W Tubelight	9	9
Illawarra and South East	Nowra High School	Vandal Resistant	1x20W Vandal Resistant	1	1
Illawarra and South East	Nowra High School	Vandal Resistant	2x40W Vandal Resistant	2	2
Illawarra and South East	Nowra High School	Weatherproof	1x20W Weatherproof	128	126
Illawarra and South East	Nowra High School	Weatherproof	1x40W Weatherproof	41	41

4 SCHOOL SCHEDULES

Region Name	Entity1_Name	Item_Type	Luminaire Type on Site	Existing Quantity	Upgrade Quantity
Illawarra and South East	Vincentia High School	Batten	1x20W Batten	4	4
Illawarra and South East	Vincentia High School	Batten	1x20W Batten with diffuser	6	6
Illawarra and South East	Vincentia High School	Batten	1x40W Batten	3	3
Illawarra and South East	Vincentia High School	Batten	1x40W Batten with diffuser	25	24
Illawarra and South East	Vincentia High School	Batten	1x65W Batten	36	36
Illawarra and South East	Vincentia High School	Batten	2x20W Batten	10	8
Illawarra and South East	Vincentia High School	Batten	2x40W Batten	8	8
Illawarra and South East	Vincentia High School	Batten	2x65W Batten	5	4
Illawarra and South East	Vincentia High School	Batten	2x65W Batten with diffuser	0	1
Illawarra and South East	Vincentia High School	Florescent	Compact Florescent	22	22
Illawarra and South East	Vincentia High School	HID Sphere	HID Sphere	15	15
Illawarra and South East	Vincentia High School	Incandescent	Incandescent Lamp	1	1
Illawarra and South East	Vincentia High School	Recessed	1x40W Recessed	24	24
Illawarra and South East	Vincentia High School	Recessed	2x40W Recessed	75	75
Illawarra and South East	Vincentia High School	Surface Mounted	1x20W Surface Mounted Type E with Square sides	10	10
Illawarra and South East	Vincentia High School	Surface Mounted	1x40W Surface Mounted Type E	33	33
Illawarra and South East	Vincentia High School	Surface Mounted	1x40W Surface Mounted Type E with Square sides	70	70
Illawarra and South East	Vincentia High School	Surface Mounted	1x40W Surface Mounted with End Caps	5	5
Illawarra and South East	Vincentia High School	Surface Mounted	2x20W Surface Mounted Type E	1	1
Illawarra and South East	Vincentia High School	Surface Mounted	2x20W Surface Mounted with End Caps	3	3
Illawarra and South East	Vincentia High School	Surface Mounted	2x40W Surface Mounted Type E	456	432
Illawarra and South East	Vincentia High School	Surface Mounted	2x40W Surface Mounted Type E with Square sides	0	24
Illawarra and South East	Vincentia High School	Surface Mounted	2x40W Surface Mounted with End Caps	18	18
Illawarra and South East	Vincentia High School	Surface Mounted	2x65W Surface Mounted Type E	92	92
Illawarra and South East	Vincentia High School	Surface Mounted	2x65W Surface Mounted Type E with Square sides	6	6
Illawarra and South East	Vincentia High School	Surface Mounted	2x65W Surface Mounted with End Caps	4	4
Illawarra and South East	Vincentia High School	Suspended	1xMV Suspended Cylindrical	40	40
Illawarra and South East	Vincentia High School	Vandal Resistant	1x20W Vandal Resistant	1	3
Illawarra and South East	Vincentia High School	Vandal Resistant	2x20W Vandal Resistant	0	2
Illawarra and South East	Vincentia High School	Vandal Resistant	2x40W Vandal Resistant	1	2
Illawarra and South East	Vincentia High School	Weatherproof	1x20W Weatherproof	48	46
Illawarra and South East	Vincentia High School	Weatherproof	1x40W Weatherproof	15	15
Illawarra and South East	Vincentia High School	Weatherproof	2x20W Weatherproof	2	2
Illawarra and South East	Vincentia High School	Weatherproof	2x40W Weatherproof	39	39
Illawarra and South East	Vincentia High School	Weatherproof	4x20W Weatherproof	1	1

4 SCHOOL SCHEDULES

Region Name	Entity1_Name	Item_Type	Luminaire Type on Site	Existing Quantity	Upgrade Quantity
Illawarra and South East	Warilla High School	Batten	1x20W Batten	1	1
Illawarra and South East	Warilla High School	Batten	1x20W Batten with diffuser	1	1
Illawarra and South East	Warilla High School	Batten	1x40W Batten	27	0
Illawarra and South East	Warilla High School	Batten	1x40W Batten with diffuser	23	45
Illawarra and South East	Warilla High School	Batten	2x20W Batten	2	0
Illawarra and South East	Warilla High School	Batten	2x20W Batten with diffuser	0	2
Illawarra and South East	Warilla High School	Batten	2x40W Batten	32	15
Illawarra and South East	Warilla High School	Batten	2x40W Batten with diffuser	33	51
Illawarra and South East	Warilla High School	Incandescent	Incandescent Bulkhead	8	7
Illawarra and South East	Warilla High School	Incandescent	Incandescent Lamp	30	30
Illawarra and South East	Warilla High School	Recessed	1x20W Recessed	1	1
Illawarra and South East	Warilla High School	Recessed	1x40W Recessed	3	3
Illawarra and South East	Warilla High School	Recessed	2x20W Recessed	1	1
Illawarra and South East	Warilla High School	Recessed	2x40W Recessed	37	37
Illawarra and South East	Warilla High School	Surface Mounted	1x20W Surface Mounted Type E with Square sides	8	8
Illawarra and South East	Warilla High School	Surface Mounted	1x20W Surface Mounted with End Caps	1	1
Illawarra and South East	Warilla High School	Surface Mounted	1x40W Surface Mounted Type E	4	4
Illawarra and South East	Warilla High School	Surface Mounted	1x40W Surface Mounted Type E with Square sides	5	5
Illawarra and South East	Warilla High School	Surface Mounted	1x40W Surface Mounted with End Caps	2	2
Illawarra and South East	Warilla High School	Surface Mounted	1x65W Surface Mounted Type E with Square sides	1	1
Illawarra and South East	Warilla High School	Surface Mounted	2x20W Surface Mounted with End Caps	4	4
Illawarra and South East	Warilla High School	Surface Mounted	2x40W Surface Mounted Type E	48	46
Illawarra and South East	Warilla High School	Surface Mounted	2x40W Surface Mounted Type E with Square sides	2	24
Illawarra and South East	Warilla High School	Surface Mounted	2x40W Surface Mounted with End Caps	467	447
Illawarra and South East	Warilla High School	Surface Mounted	2x65W Surface Mounted Type E	4	4
Illawarra and South East	Warilla High School	Surface Mounted	2x65W Surface Mounted Type E with Square sides	3	3
Illawarra and South East	Warilla High School	Surface Mounted	3x40W Surface Mounted Type E	1	1
Illawarra and South East	Warilla High School	Surface Mounted	3x40W Surface Mounted with End Caps	121	121
Illawarra and South East	Warilla High School	Vandal Resistant	1x20W Vandal Resistant	11	12
Illawarra and South East	Warilla High School	Vandal Resistant	1x40W Vandal Resistant	4	4
Illawarra and South East	Warilla High School	Vandal Resistant	2x20W Vandal Resistant	12	12
Illawarra and South East	Warilla High School	Vandal Resistant	2x40W Vandal Resistant	1	4
Illawarra and South East	Warilla High School	Weatherproof	1x20W Weatherproof	21	20
Illawarra and South East	Warilla High School	Weatherproof	1x40W Weatherproof	15	15
Illawarra and South East	Warilla High School	Weatherproof	2x20W Weatherproof	63	63
Illawarra and South East	Warilla High School	Weatherproof	2x40W Weatherproof	16	16

Lighting Upgrade to Four High Schools - Illawarra Region