Written Examination Paper

Given the big increase in candidates sitting the 2012 examination, the assessment process has been refined to ensure that all papers have been assessed a minimum of two times by different assessors.

Four assessors marked the papers. This was done by two assessors each marking a different question from the same section. The same assessors swapped and checked and moderated the assessments made by the first. During this stage assessors working on the other section were called upon for advice. Finally, all answers in the ‘D’ range were checked a third time. An extra an independent assessor was then called upon to review any responses that were still under review. The same independent assessor also checked all ‘D’ range responses in all questions.

Question 1

As this question is typical and appears in similar form each year, there appeared to be no issues with candidate’s understanding of the question requirements.

Responses from the A & B levels:

Candidates with an A, or B, were able to clearly articulate their understand of sun angles, R values and supplied well written annotations which were accurate in outlining exactly why design choices where made in relation to the question’s requirements. The plans and sections where clearly drawn with the higher grades being awarded to candidates including diagrams with their annotations.

Candidates within the A range demonstrated excellent knowledge as well as design skill addressing the criterion.

Responses from the C levels:

Candidate responses within this range demonstrated a basic understanding of R Values, sun angles and passive solar principles. However annotated graphic detail mentioned facts and design decisions, yet largely did not give reasons or explanations for these.

The C- range demonstrated only a basic understanding of the site conditions.

Question 2

This question was written in a new way to allow for candidates to demonstrate more creative design approaches. The question was complex and required dealing with two small buildings
and their positioning on a simple site. This aspect required candidates to resolve how one building related to another in relation to the site as a whole. Generally this was handled well.

Responses from the A & B levels:

Candidates within the A and B range demonstrated a strong understating of the climate type and employed many design techniques to answer the question. Candidates in this band also managed to synthesise the building design with the site planning requirements. Also within this range were the various ways that building arrangements could be arranged on site.

Longest building edge facing directly north then northeast orientations and longest building edge facing directly east were all present and equally well resolved. Candidates within the A range also demonstrated design creativity in balancing many different design requirements.

Responses from the C levels:

Candidate responses in the C range demonstrated a basic understanding of tropical conditions often made errors with cross veneration and orientation or did not appear to include design principals employing solar geometry. In some cases candidates did not respond coherently to the specific siting requirements of the question.

Question 3

This question provided a challenge in that candidates were expected to layout a bathroom, kitchen and furniture for comfortable living. Candidates who had an accurate grasp of appropriate dimensions and heights for wheelchair accessibility, and the ability to apply these to the space effectively and justify their decisions scored highly on this question. However, there were many candidates who did not demonstrate an understanding of these requirements and thus answered poorly. Candidates who have difficulty remembering figures may have been better served answering Question 4, as this did not require the detailed application of such specific measurements. Candidates should be reminded of the need to appropriately annotate at all times. To reach the C standard candidates still need to annotate and justify their design decisions. There were a large number of D ratings for this question. Lack of annotations and lack of accurate measurements were the biggest contributors to low marks in this section. All papers marked at a D rating were considered separately by three examiners to ensure the standards had been applied correctly and consistently regardless of whether the candidates chose to answer question 3 or 4.

Stronger responses included:

- Annotations of appropriate heights for wheelchair accessibility
- Clear flow throughout, without interruptions to spaces
- Privacy and correct zoning of public and private areas
- Consideration of light in to the unit
- The possibility of visitors and how their needs may be met
Clear annotations justifying *why* design decisions had been made and *how* these decisions contribute to meeting the needs of the occupant

Common errors were:

- Lack of height annotations, including basic requirements such as bench height, knee space, overhead cupboards and switches
- Not allowing adequate accessible preparation space in the kitchen
- Not including storage space in the kitchen, bathroom or bedroom
- Not allowing transfer space to toilet, shower seat or bed
- Using swinging rather than sliding doors throughout
- Not having front or back entrances at all so the unit was entirely inaccessible
- Having flow intersecting kitchen work triangles or lounge areas

Some candidates tended to rely on the use of height adjustable items, remote controls and sensors. If used, these should be in conjunction with good, accessible design and *also* show the candidates' knowledge of appropriate heights, rather than *instead* of doing this. For example, an annotation might say; height adjustable kitchen bench, set at 800mm to meet Josh's needs.

Candidates also lost marks for moving or removing the bathroom and not providing anything at all on which to sleep. This did not meet the question's requirement of furniture for comfortable living.

**Question 4**

Question Four was a new style of question for Criterion Four, based solely on design principles and a design solution. The Examiners were pleasantly surprised by the quality of the majority of responses related to this new design focus.

Candidates who attempt this style of question in the future should:

- Read the question very carefully and note the requirements, and restrictions, of the question and ensure their response addresses all of these.
- Draft and reflect upon more than one solution before fully committing to a final solution (many candidates designed themselves into a 'corner').
- Make all annotations succinct, and ensure that the majority of these annotations describe the justification for the specific part of the drawn response (e.g. Simply writing 'door' is not enough info as we need to know why the door is positioned there or its function).
- Use appropriate scale and drawing conventions. Many candidates did not use the scale provided for in the question and doors, especially sliding doors, were not drawn correctly.
Responses from the A & B levels:

Candidates who provided responses that reflected an ‘A’ or ‘B’ rating clearly demonstrated, through both succinct annotation and accurate drawing, justification for their design solution. They also provided a solution that met the design requirements, whilst taking into consideration the given limitations of the design brief in the question.

Responses from the C levels:

Candidates who provided responses that reflected a ‘C’ rating, either provided a design solution that fell short of some of the design requirements of the brief, or provided a solution that did not address all the given design restrictions.

Externally Assessed Folio

Folios produced encompassed a wide variety of topics. Some candidates still manage to do themselves a disservice by tackling topics far too large such as office blocks or complete for bedroom houses. This commonly leads to candidates not having time to go into enough depth to demonstrate their learning and understanding at the level required to achieve higher marks. Overall, referencing has improved but there is still some way to go with this, especially in correctly in-text referencing all images which are not the candidate’s own.

Brief and aims

The majority of folios contained clear briefs. Although some briefs and aims are still far too wordy. A brief should be brief. Candidates need to be guided in setting briefs that are achievable but that also demonstrate the depth of work and understanding required to meet the pre-tertiary standards. It is an ongoing theme of some candidates tackling projects that are too large, such as designing whole houses, and not doing it in enough depth to meet the standards.

There is some disparity with aims. Candidates need to set aims that relate to the brief and, as with the brief, are achievable and show understanding. Some aims are still very generic, making it difficult for candidates to meet the aims and even more difficult for the examiner to assess. However some aims swing too far the other way and are too prescribed, for example, an aim that states the candidate will incorporate an X-brand solar hot water system. At the end the candidate then states they have achieved that aim by incorporating that system. This is not adding anything to the folio unless the candidate shows why they chose that system, what others they investigated, how it linked to the design and how it helps achieve the brief.

Other aims have been specified without a clear understanding of the correct terminology, eg. contemporary design, dynamic design, sustainability etc. The candidate needs to explain what they mean by such terms so it can be assessed as to whether they have achieved these or not.
Precedents

Generally speaking the precedents sections this year have continued to improve on previous years folios. A significant number of weaker folios, included in precedents aspects such as theory and single options of commercial products that enable the theory, no actual design precedents in the folio. Precedents should incorporate design precedents as specified in the folio guidelines.

Context

Many folios would benefit from more emphasis being put on the context statement as it adds depth and understanding to the problem being solved. The context section adds the background information to the design situation which can be very important when assessing the effectiveness of a design. A number of folios had little effort put into this section.

Some folios were still entirely missing context sections, even after this had been identified as an issue in last year’s report. This is a required section which must be included and candidates automatically lose marks if they do not complete this section.

Strong context sections contained images taken by the candidate and gave information about what was around the site which might impact on the design. Again it needs to be emphasised that if the design is based on internal rooms only, then it is detail about the rooms around that form the bulk of the context and anything relating to any external walls this site might have – not what direction the wind is coming from on the opposite side of the house.

Site Analysis

This was generally completed well this year. However, weaker folios included pictures, but no actual analysis of the site or discussion of how the site might affect the final design. Another issue was candidates completing incorrect site analysis. Eg. Completing external analysis when the folio is an interior project.

Design Development

Design development was often the weakest aspect of folios. Many design concepts and design developments are not realistic possibilities. This is often accompanied by lack of real development or concentration on one aspect only in development but the final design shows everything complete. An example was a kitchen and deck for an existing house that does not have a deck. The whole design development section ignored the deck and concentrated only on the kitchen, but the deck showed in the final plan.

The quality of sketching varied enormously – candidates need to recognise that their rough hand drawn sketches that can be photocopied or scanned in are often better at showing their
thought processes and design development than the very tidy concept drawing that does not show development nor ties to precedents and aims.

Some folios only include bubble diagrams for this section. This is insufficient and cannot adequately demonstrate a meaningful design development process.

**Design Resolution**

Some folios presented this very effectively, showing progression from the precedents, through design development to final design. Unfortunately many folios did not demonstrate these links. Sometimes final designs, which candidates claim meet all the aims and brief, appear almost out of nowhere and show little resemblance to the work in the body of the folio. Final designs need to be justified, regardless of whether these points were made throughout design development.

**Referencing**

Whilst there is still some way to go, there has been some improvement in the standard of referencing this year. Candidates need to be reminded to use one system throughout and to always include in text referencing where required.
### Award Distribution

<table>
<thead>
<tr>
<th></th>
<th>EA</th>
<th>HA</th>
<th>CA</th>
<th>SA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>This year</td>
<td>5% (11)</td>
<td>8% (19)</td>
<td>46% (109)</td>
<td>42% (100)</td>
<td>239</td>
</tr>
<tr>
<td>Last year</td>
<td>3% (8)</td>
<td>7% (16)</td>
<td>42% (97)</td>
<td>47% (108)</td>
<td>229</td>
</tr>
<tr>
<td>Last year (all examined subjects)</td>
<td>11 %</td>
<td>19 %</td>
<td>39 %</td>
<td>30 %</td>
<td></td>
</tr>
<tr>
<td>Previous 5 years</td>
<td>5 %</td>
<td>11 %</td>
<td>43 %</td>
<td>41 %</td>
<td></td>
</tr>
<tr>
<td>Previous 5 years (all examined subjects)</td>
<td>11 %</td>
<td>19 %</td>
<td>40 %</td>
<td>30 %</td>
<td></td>
</tr>
</tbody>
</table>

### Student Distribution (SA or better)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Year 11</th>
<th>Year 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>This year</td>
<td>56% (134)</td>
<td>44% (105)</td>
<td>30% (71)</td>
<td>70% (168)</td>
</tr>
<tr>
<td>Last year</td>
<td>54% (124)</td>
<td>46% (105)</td>
<td>38% (86)</td>
<td>62% (143)</td>
</tr>
<tr>
<td>Previous 5 years</td>
<td>50%</td>
<td>50%</td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>