

POST OCCUPANCY EVALUATION

ENDEAVOUR SCHOOL FLAGSTAFF, HAMILTON



April 2016

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Date: April 2016
Reference: 1-46083.00
Status: Final

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1 EXECUTIVE SUMMARY

1.1 SCOPE OF POST OCCUPANCY EVALUATION

The Ministry of Education (MoE) commissioned Opus International Consultants Ltd to undertake a Post Occupancy Evaluation (POE) of the buildings and immediate exterior at Endeavour School, Flagstaff, Hamilton. The purpose of the review in accordance with the commissioning brief was to: -

Evaluate the effectiveness of the design and procurement *process*.

Evaluate the end *product* of the completed school facility in terms of its compliance with the MoE guidelines.

Evaluate the *performance* of the completed school as a suitable learning environment. The aim of the evaluation survey is to identify the positive and negative aspects of the new school project and give recommendations that will increase the effectiveness of future school development projects. These aspects have been identified through an interview with key school staff, observations made by the survey team, and ad-hoc discussions with staff and users during the survey of the school. The key recommendations identified have been categorised into two sections, general and school specific.

This report and evaluation has been prepared based upon the MoE standards, the building code and relevant NZ standards in place at the time of the design and construction of the school. Comparing the school's design and specification to these sources provides comparative observations which will help inform the continued evolution of the MoE's guidelines.

1.2 BACKGROUND

Endeavour School is a state primary school for students in Years 0 to 6. The school is located at Endeavour Avenue, Flagstaff, Hamilton. The school accepts students from the north east area of Hamilton. The school initially opened with a roll of 140 students which has risen significantly to a current roll of approximately 290.

Endeavour School is directly opposite a public park, and positioned in amongst residential properties. The school consists of three main buildings and a caretaker's store / bicycle storage shelter. Buildings A and B contain general learning spaces, with the admin block attached to Building A. The library and multi-purpose spaces are contained within Building C.

The school was designed by AECOM in 2014 and built by Foster Construction Limited. The school was constructed in two stages. Stage one accommodated 400 students, with stage two adding learning spaces and bringing the school's capacity to 600 students. The school was ready for Term one in 2015, officially opening at the start of 2015.

1.3 CONCLUSION

Endeavour School presents a strong modern learning environment in response to a growing need for primary education in this suburb of Hamilton.

There are many positive aspects within the school which are the result of a good approach to design and suitable specification. The internal features within the school are of a good quality, fit for purpose, accessible, compliant and easy to operate.

While the outside space is well regarded and is considered to add a resource to the learning experience, there have been some issues with quality of the playing surfaces and the provision of shading to some of the outside space.

In conclusion, the school's needs are met and the property meets New Zealand and Ministry of Education standards and specifications in place at the time of design. Some minor specification and accommodation issues are capable of being rectified relatively easy which will offer more versatile space. The staff and head of school reported that they are happy with the facilities.

1.4 KEY OUTCOMES

Findings of this Post Occupancy Evaluation indicate that the staff and head of school are happy with the facilities. The design of the school meets relevant standards and specifications in place at the time the design was completed. A number of specific design elements were identified at Endeavour School that show good practice. These include:

- The ventilation for the school is provided by a passive ventilation system supplemented by ceiling fans. The ceiling fans allow the school to stay cool in summer days. The major benefit of this is the energy cost savings to the school.
- The pickup and drop off zone is well positioned at the front of the school separate from the carpark area. Its simple uncomplicated design means parents utilise it well for dropping children off in a safe environment.
- Services are well secured in a central maintenance cupboard for each building and do not protrude into circulation spaces. This provides adequate protection for occupants and allows easy access for maintenance and repairs by service contractors.
- The multipurpose hall is considered very successful. It is a well-used, modern, purpose built hall that it is used by outside groups up to 5 nights a week. The flooring is easy to clean; the outer roller doors allow openness, ventilation and access.
- The design and layout of general learning areas are considered by the user to be positive environments. The open design allows several small groups to work well in a learning area. This is achieved by each space split by a central “Y” shaped wall feature which allows a group to have quite separate and discreet space.
- Use of sound deadening Autex on the walls has been well received by users and is seen to be effective. The hardness of the product and flexibility as a pin or display board is welcomed by the teachers. It has been very effective at reducing damage to internal walls while also creating a good aesthetic within the learning areas.
- The school has a rainwater harvesting/roof water catchment system with water storage tanks on the school grounds. This is used for hose taps and toilets reducing the schools public water cost. By flowing this water into tanks and using it for non-potable applications, the school has created a sustainable way to meet at least some of its water demands.

1.5 GENERAL RECOMMENDATIONS

A number of general recommendations have been identified as a result of the survey and interview at Endeavour School. These include:

- Users of Endeavour School would like a greater amount of storage for teaching equipment, resources and students’ equipment. They consider that this will help to declutter learning spaces.
- Improvements to the specification of fencing & gates with regard to purpose, material and location would help to ensure low maintenance and fitness for purpose.
- Building Management System (BMS) need to be reviewed to produce appropriate user’s guides to ensure and ease of operation by users.
- Users have commented that the provision of shading to areas with outdoor seating would be a benefit. Provision of shade sails over the outdoor seating areas would provide a quality and cost efficient way to provide good covered areas for users, while facilitating the use of these spaces for outdoor learning.
- Guidelines surrounding the detailing and installation of paved courts should be undertaken to ensure fit for purpose playing surfaces.
- The specification of heating capacity for spaces to avoid excessive numbers of heating and or ventilation units could provide future benefits.

1.6 ENDEAVOUR SCHOOL – SPECIFIC COMMENTS

Further comments specific to the findings of the survey at Endeavour School include:

- The staff appreciated having multiple pedestrian routes into the school. As Endeavour School is adjacent to council reserves and a public walkway linked to council car parking (not on Endeavour Avenue), there are alternative locations for students to be dropped off and walk into school. This has reduced the congestion on Endeavour Avenue at peak times.
- Users have indicated that the shelter provided by the covered ways is ineffective. Larger overhangs or some element of side protection would improve the usability of the covered ways during poor weather.
- School users consider that the conversion of the board room into a full shared teacher work space will allow teachers to do quiet work or to collaborate in smaller groups, as current areas for teachers to work outside of learning spaces are limited.
- Users believe that radiant heaters in the design room, library and gym have been making those spaces too hot.
- Users found the limestone surface for the bike tracks to be a constant problem due to it sticking to people's shoes and being rubbed off onto surfaces within the school buildings.

1.7 COMPLIANCE WITH STANDARDS AND SPECIFICATIONS

The Ministry of Education wishes to understand how building standards and specifications are being met. This will help the Ministry gauge their property solution at the school in terms of technical performance, functionality, operational processes and examine buildings as they are used by various stakeholders.

A quantitative assessment of compliance has been undertaken for Endeavour School, based upon project and design documentation provided by the MoE. This can be found within section 5 *COMPLIANCE REGISTER* of this report. Additional compliance documentation can be found in *Appendix 6.1 COMPLIANCE DOCUMENTATION*.

The result of the quantitative compliance register is that Endeavour School has successfully complied with all relevant Ministry of Education design guidelines, New Zealand Standards, NZ Building Code guidance and territorial requirements applicable at the time of design and construction of the school that was assessed against.

2 SURVEY METHODOLOGY

The evaluation methodology is based on the UK Building Research Establishment (BRE) early stage POE methodology combined with specific MoE design requirements covering the procurement process from inception to completion, as well as relevant New Zealand and territorial requirements and standards. The three main assessment criteria used for the investigation are Process, Product and Performance.

PROCESS

This aspect of the POE seeks to identify how well the project performed using both a generic construction industry assessment framework and the MoE design requirements. The information will be collated from contract documentation provided by the MoE and interviews with MoE project representatives.

PRODUCT

This aspect of the evaluation seeks to understand the extent to which the facilities meet the core elements of the MoE design requirements.

PERFORMANCE

The final element of the evaluation seeks to determine the contribution that the facilities make towards the MoE goal of excellent educational outcomes. Three key elements of this assessment are functionality and fitness for purpose.

The information gathered under the above assessment criteria is collected by way of an interview with key school staff using a structured template of questions, one-to-one discussion with users of the school, observations and measurements made during a survey of the buildings and grounds, and analysis of project documentation provided by the MoE. The data is then collated under four headings in order to examine how specific building features perform and compare to the MoE design criteria and relevant New Zealand and territorial standards and requirements of the time for: -

- Accessibility
- Health & Safety
- Modern Learning Environments
- Sustainability



Figure 1

3 BACKGROUND OF THE SCHOOL

Endeavour School is a state primary school for students in Years 0 to 6. The school was designed by AECOM architects in 2014 and built by Foster Construction Limited. The school was constructed in two stages with stage one accommodating for 400 students and stage two adding another 200. The school was ready for Term one 2015, officially opening at the start of 2015.

The school is located at Endeavour Avenue, Flagstaff, Hamilton within a 15 minute drive from the Waikato CBD. It is in a suburban residential area opposite a public park and is in an area where most students walk to school. The school accepts students from the north east area of Hamilton. The school initially opened with a roll of 140 students which has risen significantly to a current roll of approximately 290. Additional buildings are planned in future years which will give the school capacity for up to 600 students.

The main school buildings are a small maintenance shed and covered bike storage (E), a building containing a multipurpose hall and library (C), and two separate single storey blocks for classrooms (A & B). These blocks are open plan classrooms that can have a multitude of classes running in one block. They also feature breakout rooms for individual student learning and wet areas. The administration block is attached to building A. Building D is planned for future expansion of the school

The school has many onsite facilities for students including a playground, playing fields, courts and an outdoor bicycle track for student use.



Figure 2 - Aerial – Endeavour School

4 EVALUATION

4.1 ACCESSIBILITY

Positives:

- The pickup and drop off zone is well positioned at the front of the school separate from the carpark area. This is in accordance with MoE guidelines. The Principal commented its simple uncomplicated design ensures ease of access by both parents and students. See Figure 3.
- Vehicular circulation through the site is good due to the design and clear marking in accordance with MoE criteria. The Principal commented that very few problems had been encountered even with the heavy vehicle numbers at peak school hours in the early morning and afternoon periods. See Figure 4.
- The school has a clear internal pedestrian circulation route based around covered walkways which link the separate buildings. This is easy to follow due to the compact site design and the way the buildings sit in relation to those pathways. See Figure 5.
- Many students living in the area walk to school. Their access into the school is well supported by two unmarked “care crossings” setup on either entrance way into the school.
- All school blocks have accessible toilets located next to student toilets. The accessible facilities also include accessible showers. There is also space within these areas that allows accessible hoists to be installed in the future. As the school has no disabled students these facilities have not needed to be used. See Figure 6.
- The Principal commented that when the school initially opened reception and individual learning areas were not easily found by visitors to the site. The school has subsequently added more signage to improve wayfinding. Users in the school confirm this has been successful in solving the problem. See Figure 7.
- The automatic window controls are at an accessible height for all users.
- Emergency call/panic buttons are installed inside all accessible toilets, aside from in the admin block which the Principal believes may not have been installed due to the permanent presence of staff in this area.

Negatives:

- It was confirmed by the school that in the early days of the school opening there was a need for staff to manage parents driving students to school to ensure the drop off zone is used correctly. This had to be done to relieve the initial congestion problems.
- Building entrances and walkways between buildings provide little cover from the effects of the weather. Users consider the canopies above walkways are too narrow to give adequate protection in adverse weather conditions.



Figure 3



Figure 4



Figure 5



Figure 6

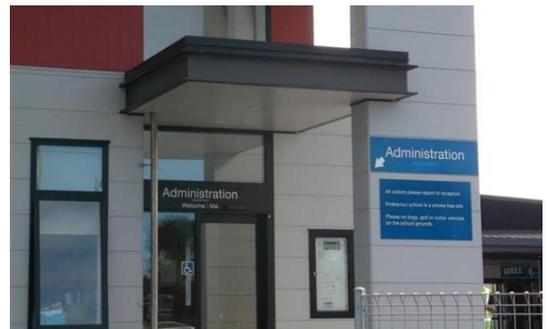


Figure 7

- There is no internal access or external covered route provided between the administration areas and the learning areas within the same building.
- The school main entrance is marked as an accessible entrance (has accessibility sign adjacent), but is non-compliant. The width is less than required for an accessible doorway. See Figure 8. There is an alternative accessible entry to the reception area around the side, which is compliant.
- The Principal commented that the staff carpark is already over capacity and many of his staff are parking off site. He commented that this problem will only get worse as the school grows and more staff are employed.
- Controls of the underfloor heating are via the Building Management System (BMS). The Principal commented he has had difficulty changing options with the BMS system. See Figure 10.
- Staff have advised that the handover information provided at the opening of the school is too complex for them to make use of. Reportedly, it is not a user friendly template and there is too much technical information to sift through for staff to be able to understand clearly. A simpler User Guide would have assisted staff in understanding and being able to meet the maintenance requirements of the system.



Figure 8



Figure 9



Figure 10

4.2 HEALTH AND SAFETY

Positives:

- Fencing is provided in line with MoE guidelines to the road and all neighbouring property boundaries. The use of retractable gates restricts after hours vehicle access to the school buildings. See Figure 11.
- The exterior of the school is well lit with perimeter bulkhead lights around the outside of the buildings and pole mounted exterior lighting to the drop-off zone and staff car park area. See Figure 12.
- Services are well secured, being located in a lockable central maintenance cupboard for each building. The service design has avoided any protrusions into circulation routes where possible. This provides protection for occupants and allows easy access for maintenance and repairs by service contractors. See Figure 13.
- Ceiling mounted electric radiant heaters are correctly installed in locations out of reach of students and staff. See Figure 14.



Figure 11



Figure 12

- The health space is located directly behind the admin/reception area. This allows easy oversight into the health space from reception.
- Each building is equipped with a sounder type alarm system to notify occupants when there is an emergency.
- The external tap provided in the bike area can only be used with a key. This prevents unauthorised use by students.
- The school multipurpose hall is booked out five nights per week. This aligns to stated objectives within the New Zealand Schools Property Strategy and community use. The school is able to allow external group's access to the hall whilst ensuring the remainder of the school is locked and secure.
- The staff room has good overview to the field and courtyard. This allows staff the ability to monitor children during their break time.
- Building entrances are located to allow natural surveillance, have good lighting and protection from weather.
- The school has a dedicated bicycle track and covered bicycle storage used by students. The Principal commented that the storage was very well provided for with adequate weather protection, especially with the substantial canopy. See Figure 15 & Figure 16.
- Toilet facilities are well signed and located and laid out for safety. As a safety and security element, glass doors on either side of the toilet lobby enable teachers to see if anyone is inside lobby/basin areas without the need to physically enter the space.

Negatives:

- The back field areas are only accessible for emergency vehicles or service vehicles through a pedestrian access way which is controlled by the Council. Access is restricted by the use of padlocked bollards which can be removed by emergency services as required. This is a concern if the Council decided to cut off access. See Figure 17.
- Entrance doors into toilets are on auto closers. Users have reported that this has caused issues with students who are not wearing shoes. There are reported incidents of toenails caught in the gap between the door and frame and injuries occurring.



Figure 13



Figure 14



Figure 15



Figure 16



Figure 17

- The school has a lockdown function. The Principal commented that finding a safe place for children is difficult due to the large glass windows on the majority of teaching spaces, See Figure 18.



Figure 18

4.3 MODERN LEARNING ENVIRONMENTS

Positives:

- The Principal commented that the hard court playing surfaces provided were sufficient for the school numbers and well used by students.
- Local families have donated trees to the school to create a useful landscaped area on the eastern side of the school. This has provided good community interaction and the Principal commented it was good to have the trees which will provide valuable shading for the school in future.
- The Principal commented that he believed the school playing fields will still be adequate once the school was at full capacity. He also advised that the playing surfaces had good grass cover at the opening of the school which allowed for immediate use of the field. See Figure 19.
- Drinking fountains are well provided for within the school with each building having at least one tap. Fountains have both a drinking outlet and a bottle-filling outlet. Taps are also provided to the playing field and court area. See the fountain being used in Figure 20.
- The open design in the general learning areas are considered by users to work well, allowing learning in small groups. This is achieved by each space being broken up by a central “Y” shaped wall feature which allows a group to have discreet work space. See Figure 21.
- Every learning area is equipped with a breakout room which allows the space to be used by individual students or small groups. Staff commented these worked well for older students who could be trusted to work alone. The use of glass walls within these spaces meant that staff could still monitor the areas and the activities of the students. See Figure 22.
- Wet areas give students a different type of place to learn. The Principal commented these areas are used for all different types of activities, not just specific projects, and he liked the flexibility of the space. See Figure 23.
- The Principal commented the multipurpose hall has been very successful. He confirmed that the hall and it is well used by outside groups, for up to five nights per week. The flooring is easy to clean; the outer roller doors allow openness, ventilation and access. See Figure 24.



Figure 19



Figure 20



Figure 21



Figure 22

- The ventilation for the school is provided by a passive ventilation system supplemented by ceiling fans. The Principal commented that when the fans are turned on early in the day and windows opened, the school had good ventilation throughout.
- The Principal indicated that the lighting system is good throughout the school. In particular, the system is efficient and does not create distracting glare in the learning spaces. See Figure 25.
- The Wi-Fi provided has good coverage throughout the school. The school invested heavily in devices that were Wi-Fi compatible to give flexibility of use throughout the school. Multimedia facilities for video and audio are provided in all general areas. LAN is well provided for as a resilient backup.
- Users indicated that the power supply for general and specialist equipment requirements within the teaching spaces is sufficient for their needs.
- The Principal commented the PA system works well and is well placed so that it can be used to specifically inform individual areas of school as the need arises.
- Health facilities provided at the school are seen as a successful addition to the school by the users. They have appropriate flooring, are easy to clean, have good sight, lockable cupboards and beds provided. The Principal's only concern was at full capacity it might be too small.
- Room acoustics are considered to be good by the users occupying the main teaching spaces. The use of Autex on many of the internal wall surfaces has had the desired effect of keeping transfer noise to a minimum.

Negatives: -

- Building eaves only provide limited cover (outdoor shading) for students. There is no shading to outdoor seating. See Figure 26.
- Users confirmed that storage for students' bags is insufficient. Many of the shelves provided are not big enough to take students books and belongings and there are not enough units to enable each student occupying the teaching spaces to have an individual space. See Figure 27.
- There is no established planting/tree shading in the areas surrounding the playing fields. Staff reported that outdoor learning was lessened by the lack of shaded areas. See Figure 19.
- Teachers have commented that they do not have adequate work areas. There is no shared staff work space. To cope with this the staff have adapted the board room for use as a work space. See Figure 28.
- A server room was added to Building C. The Principal has commented that this was unnecessary as the school use iCloud storage to save information.



Figure 23



Figure 24

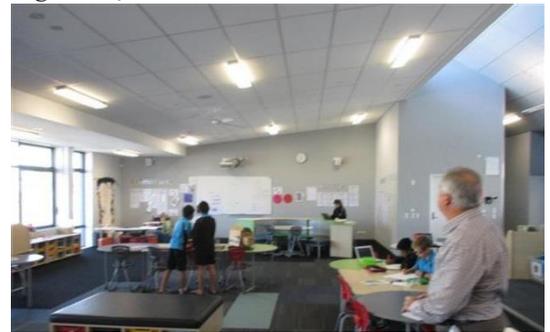


Figure 25



Figure 26



Figure 27

- The Principal commented that the admin work space behind reception is only sufficient for one or two people working, and is a noisy and often-disrupted space. Staff advised that they would have preferred some level of enclosure or separation between the reception area and admin work space. See Figure 29.
- The users consider the maintenance shed is too small. The concrete pad on which it sits is greater than the shed area. This concrete area should have been used to enable a larger shed to be installed.
- The Principal advised that the original paved playing courts had an uneven surface and were poorly finished. The school tried to remedy this by re-covering the area in “tiger turf” but this was not sufficient to improve the uneven surface, which has large undulations and slope to it. See Figure 30.
- The Principal felt there was too many landscaped areas covered in bark chippings. He felt these areas would have been better left grass to allow more flexible use of the space. He commented the bark tends to wash away in bad rain.
- There was little protection provided for fixtures and fittings within the school hall. The school had to install a cage on the projector to protect it. An electric wall panel was replaced due to damage resulting from the room being used for physical education classes. See Figure 31.
- The Principal considers the library too small both for their full catalogue, and for teachers to use as an additional teaching area.
- The Principal commented that lack of independent controls on the radiant heaters, as well as the number of radiant heaters in the space, has led to children overheating in the library, design room and gym spaces. See Figure 32 within the library, which gives a view to the number of radiant heaters installed.
- The Principal considers the underfloor heating as unsuitable, and difficult to control to create the right temperature. It was noted that this creates an uncomfortable working environment for students.



Figure 28



Figure 29



Figure 30



Figure 31

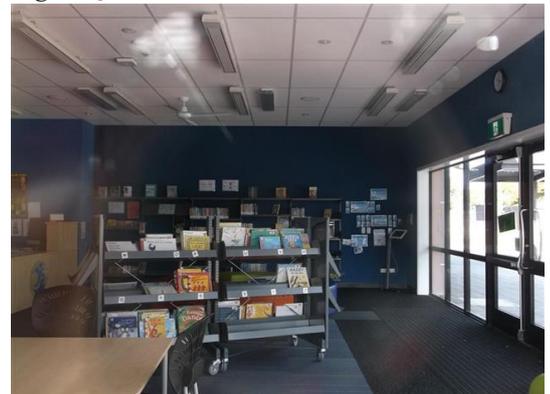


Figure 32

4.4 SUSTAINABILITY

Positives: -

- Use of sound deadening Autex on the walls has been well received by users and is seen to be effective. The acoustic nature of the product and its flexibility as a pin or display board is welcomed by the teachers. See Figure 33.
- The school has a rainwater harvesting/roof water catchment system with water storage tanks on the school grounds. This is used for hose taps and toilets reducing the schools public water cost. See the storage tanks in Figure 34.
- Wet areas and toilet areas have dual, low flow water systems. Floor wastes are provided to deal with water splashes from basins. Junctions between sanitary fixtures and adjacent wall/floor linings are suitably sealed.
- The vehicular access and the pedestrian pathways throughout the school grounds have appropriate falls to the drainage system.
- The internal lighting systems have automatic motion sensor control and are designed to supplement the natural light from windows, which assists with energy efficiency.
- The Principal made comment that due to the high quality materials used, he believed there would not be many issues with keeping the building in good condition.
- There is an enclosure area for rubbish storage. The area where the bins are stored is fenced with a sealed asphalt ground to enable ease of access in wet weather. See Figure 35.

Negatives: -

- The Principal has concerns over the quality of the entrance gates and fencing. Individual fence bars have fallen out and wheels have fallen off entrance gate. See Figure 36.
- Internal walls are already showing signs of marks, and the board and finish are easily damaged according to staff. The Principal commented that the Autex did not suffer this damage. Easily damaged finishes and materials have a higher maintenance requirement.
- White limestone chips and dust from the cycle/walking tracks stick to shoes and become deposited around the school. The Principal commented the limestone chip needs to be taken out as this is an ongoing problem and will increase cleaning and maintenance costs. See Figure 37.
- The hand railing up to the hall multi-purpose space has not been sufficient to deal with school use. It is showing signs of significant wear and tear, the railing is loose and threatening to come off completely. See Figure 38.

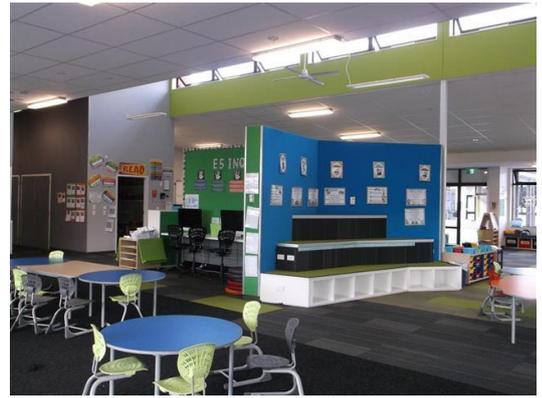


Figure 33



Figure 34



Figure 35



Figure 36



Figure 37

- The Principal suggested that the school's Building Management System (BMS) is not user friendly and too complex to understand. He indicated that many different providers wanted to show him how to do things and there was no way for him to retain all the information. The BMS manual was presented on CD. It was felt that an easy User Guide in a hard copy would be a better option.
- The Principal commented that the field overall had poor drainage. During periods of heavy rain the water pools in the middle and does not drain for several days.
- The school has CO2 sensors installed in every learning area. The Principal commented that while these are good features, two have malfunctioned and left burn marks on the walls.



Figure 38

5 COMPLIANCE REGISTER

The Ministry of Education wishes to understand how building standards and specifications are being met. This will help the Ministry gauge their property solution at the school in terms of technical performance, functionality, operational processes and examine buildings as they are used by various stakeholders.

The register below provides an assessment of where the project has met both the stated Ministry and/or New Zealand design standards and specifications in place at the time of the project. This is a high level assessment of compliance based upon the documentation provided by the MoE and observations and user perceptions collected on site.

Additional compliance documentation can be found in *Appendix 6.1 Compliance Documentation*.

Summary of Standards	Yes	No	N/A	Comments
<p>Building Act 2004</p> <p>Building Regulations (NZBC)</p> <p>Resource Management Act 1991</p> <p>Local District Plan</p>	<input checked="" type="checkbox"/>			<p>Building consent was provided by Hamilton City Council in stages during 2014. Consent numbers:</p> <ul style="list-style-type: none"> - BC 2014/30597 - BC 2014/30421. <p>Building consent confirms that the design of Endeavour School complies with Territorial requirements, Resource Management Act, the NZ Building Code, and Building Act.</p> <p>Code of Compliance Documentation provided once the project was completed is as follows:</p> <ul style="list-style-type: none"> - Blocks A, C & E - BC 2014/30597 - 15/7/15 - Block B Classrooms – BC 2014/30421 – 15/7/15 <p>NOTE: Block D is a planned future development (not yet built) and as such no CCC is required until this building has been constructed.</p> <p>Planning permission was received on 3/3/14, based upon an outlined set of works supplied to Hamilton City Council. This included a number of recommendations from the Council to be considered in the developed design.</p> <p>Certificates of Public Use were granted on 5/12/14. These allow the building to legally be occupied prior to issue of the final Code of Compliance Certificate. The following CPUs were received for Endeavour School:</p> <ul style="list-style-type: none"> - Block A – 5/12/14 - Block B - 18/12/14 - Blocks C, D & E - 13/2/15 <p>The following practical completion certificates were issued, showing completion and council approval of completed works:</p> <ul style="list-style-type: none"> - Block A – 5/12/14 - Block B – 5/1/15 - Block C, D & E – 26/2/15 <p>The above documentation comprehensively covers the regulatory compliance aspects of Endeavour School.</p>
<p>Building Warrant of Fitness (BWOFF)</p>	<input checked="" type="checkbox"/>			<p>The Building Warrant of Fitness (BWOFF) was displayed at Endeavour School as required, and was current at time of survey.</p> <p>This document is evidence that the school is compliant with ongoing maintenance requirements of the specified systems within the buildings.</p>

Summary of Standards	Yes	No	N/A	Comments
Accessibility design for people with special needs	<input checked="" type="checkbox"/>			<p>Based upon observations and measurements at Endeavour School, the facilities are compliant with:</p> <ul style="list-style-type: none"> - 'NZS 4121:2001 Design for Access and Mobility – Buildings and Associated Facilities'. <p>Provision of ramps, balustrades, stairs, accessible routes, car parks, accessible and high-dependency bathrooms, public desks/counters and entrances all meet the minimum requirement of this standard. All buildings at Endeavour School are single level, therefore there is no requirement for lifts.</p> <p>NOTE: At least one entrance into each space was compliant with the above standard at Endeavour School, however it should be noted that the main entry to reception is incorrectly marked as an accessible entry (it would be non-compliant with the above standard based on the width of the doorway). There is an alternative side entrance that was intended as the accessible entry, based upon review of supplied documentation. It appears the school staff may have incorrectly labelled the main entry with a mobility sign. As there is an alternative accessible entry to reception, this area is still compliant with the standard.</p>
Acoustics	<input checked="" type="checkbox"/>			<p>The MoE document “<i>Designing Quality Learning Spaces – Acoustics</i>” published in 2007 outlines the requirements and suggestions for improving acoustics within learning spaces.</p> <p>Observations of layout and lining materials within learning spaces at Endeavour School shows that the DQLS acoustic requirements were adhered to during design.</p> <p>Wall linings are plasterboard and fabric (Autex), and ceilings are suspended acoustic tiles. Bulk insulation was installed to exterior walls, and between some spaces internally, which also reduces the sound transfer between these spaces.</p> <p>Users indicated that high levels of noise were very rarely an issue within the learning spaces, and felt that the open-plan flexible learning spaces performed well from an acoustic perspective.</p>

Summary of Standards	Yes	No	N/A	Comments
Flexible Learning Spaces	<input checked="" type="checkbox"/>			<p>As Endeavour School is a newly developed/constructed school, the MoE requires its learning spaces to be <i>Flexible Learning Spaces</i>.</p> <p>Complying requires a number of flexible space types to be defined within the floorplans. These can be found within the <i>FLS</i> section of the MoE website under Property.</p> <p>Complying with the <i>Flexible Learning Spaces</i> requirement includes ensuring the facilities meet the <i>Designing Quality Learning Spaces (DQLS) Guidelines</i> also.</p> <p>Endeavour School's documentation, design drawings and master plan had identified all the relevant flexible space types as required.</p> <p>MoE approval documentation shows that the area allocations for these spaces were in line with requirements of the time.</p> <p>These spaces were observed on site as being in line with the documentation and plans.</p> <p>Users advised that the learning spaces were operating well, due in large part to the flexibility of the various spaces within and adjacent to them, and that this arrangement afforded them teaching opportunities that a traditional classroom layout may not.</p>
Fencing	<input checked="" type="checkbox"/>			<p>The fencing at Endeavour School is compliant with The Fencing Act 1978. The Act defines a number of terms around fencing, details the legal obligations and rights of parties constructing a boundary fence, and details the application of the act.</p> <p>MoE guidelines for fences are in the form of recommendations. These address aspects such as:</p> <ul style="list-style-type: none"> - Design and specification of types of fencing - Designing low visual impact fencing - Avoiding hazardous fencing (H&S Act 1992 is applicable to Endeavour School) - Further details for schools catering to special needs users. <p>Endeavour School featured metal pool fencing to the (south) front entrance of the school and the carpark, as well as to the western boundary. High timber fencing was provided to the other two property boundaries. The southern boundary ends at a public road (Endeavour Avenue), the western boundary ends at a council owned pedestrian walkway. The northern and eastern boundaries are shared with residential properties.</p> <p>This fencing is in compliance with the Fencing Act 1978, and falls in line with MoE guidelines for safety of users on site.</p>

Summary of Standards	Yes	No	N/A	Comments
Fire Protection and Fire Safety Design	<input checked="" type="checkbox"/>			<p>The compliance schedule (12A) provided as part of the BWOF proves compliance with NZ Building code, Resource Management Act and territorial requirements on the systems listed below:</p> <ul style="list-style-type: none"> - SS 1.1 Automatic systems for fire suppression (sprinklers) - SS 2.1 Automatic / manual emergency warning systems - SS 3.2 Access controlled doors egress - SS 4 Emergency Lighting Systems - SS 7 Automatic Back-flow preventers - SS 9 Air conditioning systems / smoke control - SS 14.2 Signs for all systems - SS 15-B Final exits – Means of escape - SS 15-C Fire separation - Means of escape - SS 15-D Signs – Means of Escape - SS 15-E Smoke separation – Means of escape <p>According to MoE guidance, the fire alarm system must comply with:</p> <ul style="list-style-type: none"> - NZS 4512:2010, or - School Fire Alarm Specifications (MOE SFA1 – 2006 MoE document outlining MoE fire alarm requirements for BOT members) <p>The Building Warrant of Fitness was current and all systems compliant at time of survey.</p> <p>Endeavour School has an NZ Fire Service approved evacuation plan in place, which is required by the MoE for all schools with greater than 100 occupants.</p>

Summary of Standards	Yes	No	N/A	Comments
Glass	<input checked="" type="checkbox"/>			<p>The current MoE requirements require Grade A Safety glass where:</p> <ul style="list-style-type: none"> - -there is a risk of people falling against it - -in all doors and panels around doors - In higher risk buildings (e.g. swimming pools and gyms) - Where glass starts less than 1.6m from the lowest point (adjacent ground/deck, etc.). Note this requirement is higher than that of NZS 4223:1999 which requires school buildings where glazing begins at 800mm or less from ground level to be safety glass) <p>In all other instances glass is required to be installed to:</p> <ul style="list-style-type: none"> - NZS 4223:1999 Glazing in Buildings – Human Impact Safety Requirements (note – this standard has been superseded in 2016. The 2016 amendment is not applicable to Endeavour School due to it being designed and built prior to that amendment) - The particular clauses within this standard that apply only to schools include 303.9 and 303.10 <p>MoE guidelines also suggest (but do not require) implementing:</p> <ul style="list-style-type: none"> - Double glazing - Anti-graffiti film <p>We were unable to determine precisely what MoE guidelines were in place during the design of Endeavour School as MoE guidance has been updated in April 2016, however the glazing is compliant with these more modern guidelines.</p> <p>Safety glass was installed in locations as defined above, and the install and details in the as-built drawings showed compliance with the relevant NZ standards listed above.</p> <p>The following CCCs were issued that certify compliance with the NZ standard, building code and territorial requirements is:</p> <ul style="list-style-type: none"> - Blocks A, C & E - BC 2014/30597 - 15/7/15 - Block B Classrooms – BC 2014/30421 – 15/7/15
Indoor Air Quality and ventilation / Air Conditioning	<input checked="" type="checkbox"/>			<p>Ventilation at Endeavour School complies with the functional and performance requirements of NZBC Clause G4 Ventilation.</p> <p>The BWOFF compliance document certified compliance with the following standards and codes:</p> <ul style="list-style-type: none"> - NZBC G4/As1 - NZS 4303:1990 – Ventilation for acceptable indoor air quality - AS/NZS 1669.2:2002 - AS/NZS 5261:2003 <p>MoE requirements for ventilation and Indoor air quality are part of the document “<i>Designing Quality Learning Spaces: Ventilation and Indoor Air Quality</i>”.</p> <p>Based upon user comments and observations, Endeavour School complied with the “Best Practice” guidelines on pg51 of this document. The designed air quality was compliant with the acceptable range as per NZS 4303:1990.</p>
Lifts in School Buildings	<input checked="" type="checkbox"/>			<p>Endeavour School is comprised of single level buildings, therefore lifts are not required and not installed.</p>

Summary of Standards	Yes	No	N/A	Comments
Lighting	<input checked="" type="checkbox"/>			<p>The compliance schedule provided as part of the BWOFF proves compliance on the systems listed below:</p> <ul style="list-style-type: none"> - SS 4 Emergency Lighting Systems <p>This shows compliance in design and performance with the following NZ Building Code Standards:</p> <ul style="list-style-type: none"> - NZS 2293.2:1995 (UPS for emergency lighting) <p>Building consent approval indicates that the design of Endeavour School was compliant with:</p> <ul style="list-style-type: none"> - NZBC Clause G8 – Artificial Lighting (to allow safe movement) - AS/NZS 1680.2.4 1997 – Interior lighting – Part 2.4: Industrial tasks and processes - AS/NZS 1680.1 – Interior and workplace lighting – Part 1: General principles and recommendations <p>Endeavour School made use of a combination of both natural lighting and artificial fluorescent lighting to provide adequate visibility. Users reported that they felt the lighting was good for the tasks they were undertaking in each space.</p>
Security	<input checked="" type="checkbox"/>			<p>Observations at Endeavour School show that it complies with MoE requirements for security design in schools, including the <i>2002 MoE Standard specification for the supply and installation of a security alarm system Part 2</i> (Technical Specification).</p> <p>The above document includes a requirement for compliance with the following NZ standards, which building consent approval certifies:</p> <ul style="list-style-type: none"> - NZS 4301:1993 Intruder Alarm Systems - NZS 4512:1997 Fire Alarm Systems in Buildings - NZ Electrical Wiring Regulations 1976 and Amendments - NZ Radio Interference Regulations and Interference Notices (Radio and Television) - NZS 127:1949 Steel conduit and fittings (BS 31) - NZS 1300:1965 General requirements for electrical appliances and accessories - NZS 4219:1983 Seismic Resistance of Engineering Systems in Buildings - NZS 6207:1892 Electrical wiring, UPVC conduit - NZS 6601:1980 Safety requirements for mains operated electronic and related apparatus for household and similar use - NZS 9002:Quality Systems and Installation <p>The school also complies with current MoE requirements, which include:</p> <ul style="list-style-type: none"> - Security system provided which discourages people entering the school without permission, alerts staff neighbours and passers-by that someone has entered without permission, can scare off intruders before they steal/do damage, alerts security guards. - <p>The school also has a lock-down function for student security, should an intruder enter site.</p> <p>The Principal indicated that he was happy with the level of security provided by the security systems at Endeavour School, and that the perimeter security lighting systems assisted greatly in engaging the community to keep a watchful eye on the grounds after schools hours.</p>

Summary of Standards	Yes	No	N/A	Comments
Sprinkler systems	<input checked="" type="checkbox"/>			<p>The compliance schedule provided as part of the BWOF proves compliance on the systems listed below:</p> <ul style="list-style-type: none"> - SS 1.1 Automatic systems for fire suppression (sprinklers) <p>Endeavour School is fitted with an automatic fire sprinkler system installed to NZS 4541:2013 NZBC C/AS1. The sprinkler system is heat activated, and is connected to alert the NZ Fire Service.</p>
Structural and Geotechnical design	<input checked="" type="checkbox"/>			<p>The building consent issued by Hamilton City Council covered the structural and geotechnical aspects of the engineering and design in the following 2014 documentation:</p> <ul style="list-style-type: none"> - BC 2014/30597 - BC 2014/30421. <p>These Code of Compliance Certificates certify that these aspects met NZ Building Code and Territorial Authority requirements:</p> <ul style="list-style-type: none"> - Blocks A, C & E - BC 2014/30597 - 15/7/15 - Block B Classrooms – BC 2014/30421 – 15/7/15
Toilets	<input checked="" type="checkbox"/>			<p>Compliance of bathrooms and toilets is assessed against:</p> <ul style="list-style-type: none"> - NZBC G1 Personal Hygiene (October 2011) <p>This standard sets out spatial requirements of bathrooms, as well as the required provision of sanitary fixtures for the number of occupants in the building. It defines how many people the facilities must be designed for (a factor of the total number of users of the building), as well as, for example, details such as number of urinals per cistern.</p> <p>There were no further requirements specific to the MoE at the time of design of Endeavour School.</p> <p>The design of the bathrooms meets the intent of NZBC G1, and meets the spatial and layout requirements set out in NZBC G1/AS1. The requirements are met in terms of the number of sanitary fixtures, baths and showers for number of occupants in the school.</p> <p>MoE guidelines have been observed. These include ensuring there are high dependency spaces for users and ensuring that toilets are accessible to all users in the space, which the design of Endeavour School complies with.</p>

Summary of Standards	Yes	No	N/A	Comments
Weather-tightness	<input checked="" type="checkbox"/>			<p>A weathertightness review of the design documentation for Endeavour School was undertaken in two stages by consulting firm Mott MacDonald:</p> <ul style="list-style-type: none"> - Weathertightness Review Report 22 April 2014 - Weathertightness Review Report 30 June 2014 (Buildings A, C & E) <p>The initial weathertightness review (22/4/14) concluded: <i>“that there are now reasonable grounds for believing that the design complies with sound weathertightness practice”</i>, with only one suggestion for improving one designed detail.</p> <p>The second weathertightness review concluded the same, with only very minor corrections to the notes to one detail.</p> <p>These documents show that the reviews were acknowledged by the designer, responded to, and recommended changes implemented.</p> <p>The above timings fall appropriately within our understanding of the project timeline, and indicate the design meets best practice requirements for weathertightness.</p> <p>The current MoE weather-tightness and Durability requirements for schools were published in August 2014, and are therefore not applicable to Endeavour School. MoE requirements that were in force at the time of the design and construction of Endeavour School were not available for reference.</p> <p>Observations on site revealed that the selected claddings and materials are in line with current MoE requirements listed in the August 2014 Weathertightness and Durability Requirements.</p>

6 APPENDICES

6.1 COMPLIANCE DOCUMENTATION

The following documentation has been appended to this report as evidence of compliance with the relevant MoE guidelines, NZ standards and requirements of the territorial authority:

- Code of compliance certificates
- Certificates of Public Use
- Hamilton City Council Planning Approval
- Weathertightness review 22/4/14
- Weathertightness review 22/4/14
- Certificates of Practical Completion

Form 7

Code Compliance Certificate

Building consent number: 2014/30597

Section 95, Building Act 2004



Te kaunihera o Kirikiriroa

Private Bag 3010
Hamilton 3240
New Zealand

Phone 07 838 6699
Fax 07 838 6599

info@hcc.govt.nz
www.hamilton.co.nz

The Building

Description of the building work: Endeavour Primary - Construction of Blocks A, C & E
Street Address of Building: 86 Endeavour Avenue Flagstaff Hamilton 3210
Legal Description of Land where building is located: Lot 1 DP S56186
Building Name: Endeavour Primary School
Location of building within site / block number: N/A
Level / Unit Number: N/A
Current, lawfully established, use: Assembly Care
Year First Constructed: 2014

The owner

Name of owner: Ministry of Education
Contact Person: N/A
Mailing Address: PO Box 56363
Dominion Road
Auckland 1446

Street address/registered office: N/A

Phone number:
Landline: 09 632 9400
Mobile: N/A
Daytime: N/A
After hours: N/A
Facsimile number: N/A
Email address: enquiries.auckland@minedu.govt.nz
Website: N/A

First point for communications with the council/building consent authority:

Name: Foster Construction Ltd
Mailing Address: PO Box 10063
Te Rapa
Hamilton 3241

Phone number:
Landline: 07 849 3849
Mobile: 027 684 6330
Daytime: 07 850 2089
After hours: 027 684 6330
Facsimile number: 07 849 3046
Email address: ros@fosters.co.nz

Building Work

Building consent number:

2014/30597

Issued by:

Hamilton City Council

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that-

- a) The building work complies with the building consent; and
- b) The specified systems in the building are capable of performing to the performance standards set out in the building consent.

Attachment:

Compliance Schedule



Signature

Name:

Cory Lang

Position:

Building Control Manager (Acting)

On behalf of:

Hamilton City Council

Date:

15 July 2015

Code Compliance Certificate

Building consent number:2014/30421

Section 95, Building Act 2004

Private Bag 3010
Hamilton 3240
New Zealand

Phone 07 838 6699
Fax 07 838 6599

info@hcc.govt.nz
www.hamilton.co.nz

The Building

Description of the building work: Endeavour Primary - New Construction Block B Classrooms
Street Address of Building: 86 Endeavour Avenue Flagstaff Hamilton 3210
Legal Description of Land where building is located: Lot 1 DP S56186
Building Name: Endeavour Primary School
Location of building within site / block number: N/A
Level / Unit Number: N/A
Current, lawfully established, use: Assembly Care
Year First Constructed: 2014

The owner

Name of owner: Ministry of Education
Contact Person: N/A
Mailing Address: PO Box 56363
Dominion Road
Auckland 1446

Street address/registered office: N/A

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Landline: 09 632 9400
Mobile: N/A
Daytime: 09 632 9400
After hours: N/A
Facsimile number: 09 632 9401
Email address: enquiries.auckland@minedu.govt.nz
Website: N/A

First point for communications with the council/building consent authority:

Name: Foster Construction Ltd
Mailing Address: PO Box 10063
Te Rapa
Hamilton 3241

Phone number:

Landline: 07 849 3849
Mobile: 027 684 6330
Daytime: 07 850 2069
After hours: 027 684 6330
Facsimile number: 07 849 3046
Email address: rossh@fosters.co.nz

Building Work

Building consent number:

2014/30421

Issued by:

Hamilton City Council

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that-

- a) The building work complies with the building consent; and
- b) The specified systems in the building are capable of performing to the performance standards set out in the building consent.

Attachment:

Compliance Schedule



Signature

Name:

Cory Lang

Position:

Building Control Manager (Acting)

On behalf of:

Hamilton City Council

Date:

15 July 2015

Certificate for Public Use

Section 363A, Building Act 2004 (Form 16)

Description of premises for which certificate is issued:

86 Endeavour Avenue Flagstaff 3210 for Minor Amendments to Existing Plans, Changes Clouded.

If appropriate, refer to plans or diagrams that clearly delineate the premises or part of the premises.

Building work affecting premises:

Building consent numbers: 2014/30597

Issued by: Hamilton City Council

The applicant:

Name and description of applicant: Foster Construction
Contact Person: Ross Heyblom

Mailing Address: PO Box 10063, Te Rapa, Hamilton 3241

Contact Details: Ross Heyblom
Daytime: 07 8493849
After hours: 0276846330
Email Address: rossh@fosters.co.nz
Facsimile number: 07 8493046
HCC contact person is: Phil Roberts

Public use of part of premises

The territorial authority named below, being satisfied on reasonable grounds, in relation to the building work described above, that members of the public can safely use the premises described above, issues under section 363A(2) of the Building Act 2004 this certificate for public use in respect of that part of the premises.

This certificate is subject to the following conditions:

1/ that any barriers/hoardings that are required to restrict entry to the remaining construction zones by members of the public are securely in place and will remain so until the completion of all site works in the affected areas.

2/ that all life safety systems are installed, operational, IQP tested and Hamilton City Council has received copies of all IQP test certificates and producer statements prior to the issue of this CPU.

3/ that a copy of this CPU must be displayed in the main entrance foyer to the affected buildings known as Part A (South West end of the educational purposes) and Part B (Administration block) for the entire time period that this CPU is in effect.

4/ this CPU will expire on 27 May 2015, by which date a Code Compliance Certificate must have been issued by Hamilton City Council.

Nothing in this certificate limits the duty of the owner to apply for a Code Compliance Certificate, nor does it relieve any person from compliance with any other legislative requirement.



Signature

Phil Saunders
Building Control Manager

On behalf of: Hamilton City Council
Date: 5 December 2014

Certificate for Public Use

Section 363A, Building Act 2004 (Form 16)

Description of premises for which certificate is issued:

86 Endeavour Avenue Flagstaff 3210 for Minor Amendments to Existing Plans, Changes Clouded.

If appropriate, refer to plans or diagrams that clearly delineate the premises or part of the premises.

Building work affecting premises:

Building consent numbers: 2014/30597

Issued by: Hamilton City Council

The applicant:

Name and description of applicant: Foster Construction
Contact Person: Ross Heyblom

Mailing Address: PO Box 10063, Te Rapa, Hamilton 3241

Contact Details: Ross Heyblom
Daytime: 07 8493849
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Public use of part of premises

The territorial authority named below, being satisfied on reasonable grounds, in relation to the building work described above, that members of the public can safely use the premises described above, issues under section 363A(2) of the Building Act 2004 this certificate for public use in respect of that part of the premises.

This certificate is subject to the following conditions:

1/ that any barriers/hoardings that are required to restrict entry to the remaining construction zones by members of the public are securely in place and will remain so until the completion of all site works in the affected areas.

2/ that all life safety systems are installed, operational, IQP tested and Hamilton City Council has received copies of all IQP test certificates and producer statements prior to the issue of this CPU.

3/ that a copy of this CPU must be displayed in the main entrance foyer to the affected buildings known as Part A (South West end of the educational purposes) and Part B (Administration block) for the entire time period that this CPU is in effect.

4/ this CPU will expire on 27 May 2015, by which date a Code Compliance Certificate must have been issued by Hamilton City Council.

Nothing in this certificate limits the duty of the owner to apply for a Code Compliance Certificate, nor does it relieve any person from compliance with any other legislative requirement.



Signature

Phil Saunders
Building Control Manager

On behalf of: Hamilton City Council
Date: 5 December 2014

Certificate for Public Use

Section 363A, Building Act 2004

(Form 16)

Description of premises for which certificate is issued:

86 Endeavour Avenue Flagstaff 3210 for Endeavour Primary - New Construction Block B Classrooms

If appropriate, refer to plans or diagrams that clearly delineate the premises or part of the premises.

Building work affecting premises:

Building consent numbers: 2014/30421

Issued by: Hamilton City Council

The applicant:

Name and description of applicant: Foster Construction Ltd

Contact Person: Ross Heyblom

Mailing Address: PO BOX 10063, Te Rapa, Hamilton 3241

Contact Details: Ross Heyblom

Daytime: 07 8493046

After hours: 0276846330

Email Address: rossh@fosters.co.nz

Facsimile number: 07 8493846

HCC contact person is: Phil Roberts

Public use of part of premises

The territorial authority named below, being satisfied on reasonable grounds, in relation to the building work described above, that members of the public can safely use the premises described above, issues under section 363A(2) of the Building Act 2004 this certificate for public use in respect of that part of the premises.

This certificate is subject to the following conditions:

1/ that any barriers required to prevent members of the public entering the construction zone have been securely located where required and will remain in place until the completion of the project.

2/ that all life safety systems have been installed, are operational, have been IQP tested and copies of their certification have been submitted to Hamilton City Council prior to the issuing of this CPU.

3/ that a copy of this certificate must be displayed in the main entrance of the affected buildings to inform members of the public that this building is a currently covered by a CPU and not a Code Compliance Certificate.

4/this CPU will expire on 17 June 2015.

Nothing in this certificate limits the duty of the owner to apply for a Code Compliance Certificate, nor does it relieve any person from compliance with any other legislative requirement.



Signature

Phil Saunders
Building Control Manager

On behalf of: Hamilton City Council
Date: 18 December 2014

Certificate for Public Use

Section 363A, Building Act 2004

(Form 16)

Description of premises for which certificate is issued:

86 Endeavour Avenue Flagstaff 3210 for Endeavour Primary - Construction of Blocks A, C & E

If appropriate, refer to plans or diagrams that clearly delineate the premises or part of the premises.

Building work affecting premises: 86 Endeavour Avenue – Endeavour Primary School C Block

Building consent numbers: 2014/30597

Issued by: Hamilton City Council

The applicant: Foster Construction Ltd.

Name and description of applicant: Foster Construction Ltd

Contact Person: Ross Heyblom

Mailing Address: PO Box 10063, Te Rapa, Hamilton 3241

Contact Details: Ross Heyblom

Daytime: 07 8493849

After hours: 0276846330

Email Address: rossh@fosters.co.nz

Facsimile number: 078493046

HCC contact person is: Phil Roberts

Public use of part of premises

The territorial authority named below, being satisfied on reasonable grounds, in relation to the building work described above, that members of the public can safely use the premises described above, issues under section 363A(2) of the Building Act 2004 this certificate for public use in respect of that part of the premises.

CONDITIONS

This certificate is subject to the following conditions:

1/ all life safety systems have been installed, are operational at all times, have been IQP tested and copies of their test certificates/producer statements have been received and accepted by Hamilton City Council prior to this certificate have been issued.

2/ a copy of this certificate must be displayed at the main entrance to this building until such time as the Code Compliance Certificate has been issued by Hamilton City Council.

3/ this certificate will expire on 17 August 2015, by which date a Code Compliance Certificate must have been issued by Hamilton City Council for continued use of this building to occur.

Nothing in this certificate limits the duty of the owner to apply for a Code Compliance Certificate, nor does it relieve any person from compliance with any other legislative requirement.



Signature

Cory Lang
Building Control Manager

On behalf of: Hamilton City Council
Date: 13 February 2015

3 March 2014

Aecom
PO Box 434
Waikato Mail Centre
Hamilton 3240

Attention: Christian McDean

Your ref: 60308850

Dear Sir

SUBJECT: Outline Plan of works for a Primary School at 86 Endeavour Ave, Hamilton (Council Ref: 12/2014/444)

I wish to advise that after consideration of the information and plans submitted with the application, I advise that Council's decision is as follows:

*That the Outline Plan of Works submitted by Ministry of Education (reference 12/2014/444) for the construction and operation of a school at 86 Endeavour Ave, Hamilton (Lot 152 DPS 56185 and Lot 1 DPS 56186) in accordance with the plans and information submitted to Council on 17 January 2014 and further plans submitted on 26 February 2014 is **accepted** pursuant to the provisions of Section 176(a) of the Resource Management Act.*

The following conditions are recommended to be complied with:

General

- 1. The bins on the eastern side of the site should be screened from the road and adjoining residential properties by 1.8m high close boarded fencing.*
- 2. All planting (shown in the landscaping plans) should be established prior to the commencement of the activity on the site.*
- 3. The development should adhere to the recommendations in Section 7 of the CPTED assessment, dated 15 Jan 2014 provided with the application.*

Engineering

- 4. The Ministry of Education and their relevant consultant engineers should liaise with Council's Development Engineer and School Travel Planner in determining the best workable design of the transportation components of the school's operation. In particular, parking, drop off zones, separation of pedestrians and cyclists from vehicular traffic, entry points to the campus, roadside features and such are components considered essential to the smooth functioning of the school's transportation operations, and should be addressed in consultation between the Ministry and Council.*

5. *Engineering plans should be submitted to the Planning Guidance Unit for review by Development Engineers, detailing existing and proposed water, wastewater and stormwater connections and systems, plus the transportation components of the school's operation and other relevant engineering aspects. Prior to construction commencing on site, the Ministry and Council should come to mutual agreement on final designs pertaining to transportation and Council infrastructure.*
6. *In seeking to attain a Green Star Rating, the School will be required to produce a School Travel Plan. The Ministry should advise the inaugural Board of Trustees to liaise with Council's School Travel Planner to collaboratively establish, prior to the opening of the school, both a workable travel plan and the associated culture necessary to ensure optimum success of the plan.*
7. *Hamilton City Council be requested to authorise a 40km/h speed limit to apply past the school prior to the commencement of the activity on the site, either as a school speed zone or as part of a safe speed area wide speed restriction.*
8. *Traffic Management measures on Endeavour Ave be implemented in general accordance with Plan 60308850-TR-010 submitted with the application, comprising two raised platforms with road narrowings, marking of on-street parking spaces, and the widening of the footpath along the road frontage to 2.5m, prior to the commencement of the activity on the site.*

Earthworks

9. *The Consent holder should ensure that all appropriate sediment and erosion control measures are adopted to minimise any sediment leaving the site and entering any water way. The measures should include: the erection of silt fences, stabilised entraceways, cut off drains and the connection of downpipes to the storm water system as necessary. These sediment control measures should be erected and maintained on site for the duration of the works.*

Note: refer to Waikato Regional Council's "Erosion & Sediment Control, Guidelines for Soil Disturbing Activities" which can be found at <http://www.waikatoregion.govt.nz>

10. *All public roads should be kept clean and free from silt and sediment tracked from the site.*
11. *The activity should be conducted in such a manner so as to not create a dust nuisance. A dust nuisance will occur if:*
 - *There is visible evidence of suspended solids in the air beyond the site boundary; and/or*
 - *There is visible evidence of suspended solids traceable from a dust source settling on the ground, building or structure on a neighbouring site or water.*
12. *All areas of bare earth should be re-vegetated or re-grassed as soon as practicably possible and within one calendar month following the completion of earthworks. If this can not be achieved the area should be temporarily covered by a surface suitable to protect against soil erosion until such time as re-vegetation or re-grassing can occur.*

Reasons for the Decision

- a. *The school is in accordance with the conditions of the designation. The proposal is consistent with the objectives and polices of the Operative and Proposed*

District Plan and all information requirements of an Outline plan application have been provided.

Advisory Notes

- That compliance in all other respects with Council Bylaws, all applicable Acts, Regulations and Rules of Law be met.
- This Resource Consent is not a Building consent. A Building Consent will also be required. Please contact Council's Building Unit on 838 6677 for information on Building Consent matters.

Yours faithfully



DEBRA STAN BARTON
PLANNING GUIDANCE MANAGER

For more information please contact:

Clare Douglas (Planner)

Hamilton City Council, Garden Place

Phone 07 838 6724

Email: Clare.Douglas@hcc.govt.nz

Memorandum



**To Dylan Workman of
Frequency Project
Management**

dylan@frequencyprojects.co.nz

**Michael Bilsborough of
AECOM**

michael.bilsborough@aecom.com

From John Sutherland

**Our reference 301819 Endeavour
Primary School 131**

Office Auckland

Date 22 April 2014

Your Reference 60308850

Subject Endeavour Primary School

Weathertightness Review of Documents
Sign - off

We have reviewed documents for the above project issued for 'Building Consent', received by email on 11/03/2014 and approved for review on 17/03/14. We have issued a Commentary based on the Architectural drawings listed in our Commentary document dated 20/03/2014.

The Designer's response to this commentary was formally received on 17/04/2014 by email.

Detail 2, Drawing no. AR250: Our experience with the product leads us to recommend closing off the insulation exposed at the bottom cut above the gutter with a flashing riveted up to the underside metal or some other means, even though Kingspan may not show it.

Overall the above is a minor issue easily addressed by the Designer in coming phases and we would like your confirmation that it has been instructed. All other responses to previous queries are considered to be satisfactory.

As a result of this process we can confirm that there are now reasonable grounds for believing that the design complies with sound weathertightness practice.

This document is issued for the Ministry of Education who commissioned it and for specific purposes connected with the above project. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied on by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

To AECOM NZ Ltd

From Monette Goco

**Our reference 301819 Endeavour
Primary School 131**

Office Auckland

Date 18 March 2014

Your Reference

Subject Endeavour Primary School

Weathertightness Review of Documents

The Documents

This set of drawings issued for “Building Consent” is dated 27 February 2014 and consisted of thirty-four drawings. Of this group the following were considered relevant and were reviewed:

- 60308850-AR-010 - Overall Site Plan
- 60308850-AR-011 - Partial Site Plan
- 60308850-AR-205 - Perspectives – Building B
- 60308850-AR-210 - Ground Floor Plan – Building B
- 60308850-AR-211 - Ground Floor Finishes Plan – Building B
- 60308850-AR-212 - Slab Layout Plan – Building B
- 60308850-AR-214 - Roof Plan – Building B
- 60308850-AR-215 - Reflected Ceiling Plan
- 60308850-AR-220 - Amenities Layout Plan – Building B
- 60308850-AR-230 - Elevations – Building B
- 60308850-AR-231 - Reference Elevations – Building B
- 60308850-AR-240 - Sections – Building B
- 60308850-AR-241 - Sections – Building B
- 60308850-AR-242 - Sections – Building B
- 60308850-AR-243 - Sections – Building B
- 60308850-AR-250 - Roof Details – Building B
- 60308850-AR-251 - Roof Details – Building B
- 60308850-AR-252 - Window & Door Joinery Details – Building B
- 60308850-AR-253 - Window & Door Joinery Details – Building B
- 60308850-AR-254 - Cladding Details – Building B
- 60308850-AR-290 - Door Schedule – Building B
- 60308850-AR-291 - Exterior Window Schedule – Building B

Summary

We have reviewed the Architectural Drawings issued by AECOM NZ Ltd resulting in our comments as summarized below. They are set out for discussion, alteration or confirmation. **MOE General** comments refer to issues that have arisen on most MOE projects and must be complied with. **Project General** comments refer to issues that have occurred more than once on drawings within the Project Drawings set.

Please also refer to Drawing Specific comments and commented drawings.

Drawing Reference	Reviewer Comment	Response
MOE General	<p>Air Seal: MOE recommends that the internal air seal be a wet (more compressible) seal rather than an expanding (more rigid) foam seal.</p> <p>However please note that the compatibility between sealant (air seal) and flashing tape can be an issue in that some brands of flashing tapes are not compatible with typical sealants (e.g. Sikaflex AT Façade) due to the presence of bitumen.</p> <p>Many flashing tapes are polymeric products containing bitumen and they do not have any barrier to plasticiser migration from the sealant. To resolve this Danco TD 830 aluminium foil tape can be used in addition to the flashing tape to provide a reliable separating medium, refer Sika advice note 01 March 2010.</p> <p>Other sealants may be able to present evidence of compatibility with flashing tapes and may be used without separating foil tape provided substantive evidence is given.</p> <p><i>Please confirm material of air seal and flashing tape on the drawings and/or the specification.</i></p> <p>Flashings: Please ensure that flashings are supported by mechanical fixings.</p> <p>Please review the use of flashing material where regular maintenance and compliance with specified roofing requirements may be problematic for pre-coated steel.</p> <p><i>Please show overlap detail in between flashing joints.</i></p> <p>Differential building movement: Structural beams above and below windows and doors usually have different expected deflections which result in expected vertical differential movement.</p> <p>It is always recommended to keep the windows separate from the structure, i.e. window-structure</p>	

Memorandum



**To Dylan Workman of
Frequency Project
Management**

dylan@frequencyprojects.co.nz

Nick Shackleton of AECOM

Nick.Shackleton@aecom.com

From John Sutherland

**Our reference 301819 Endeavour
Primary School (A,C,E) 147**

Office Auckland

Date 30 June 2014

Your Reference 60308850

Subject Endeavour Primary School – Buildings A, C & E
Weathertightness Review of Documents
Sign - off

We have reviewed documents for the above project issued for 'Building Consent', received by email on 28/04/2014 and approved for review on 17/03/14. We have issued a Commentary based on the Architectural drawings listed in our Commentary document dated 22/05/2014.

The Designer's response to the first commentary was formally received on 03/06/2014 by email. We issued a second Commentary document dated 13/06/2014.

The Designer has responded to our second commentary and was formally received on 20/06/2014.

Tile feature wall: We have received an email from Les Clapcott dated 30 June 2014 and he has confirmed that the MOE will not accept the use of tiles for any school project. Please provide us with information on the replacement finish and construction details.

Drain holes on UB Steel Detail at Building A: Detail 3 of Drawing AR-151 still notes "10mm Ø drainage holes @ 1200 centres" although it was confirmed to be deleted.

Overall the above are issues easily addressed by the Designer in coming phases and we would like your confirmation that it has been instructed. All other responses to previous queries are considered to be satisfactory.

As a result of this process we can confirm that there are now reasonable grounds for believing that the design complies with sound weathertightness practice.

This document is issued for the Ministry of Education who commissioned it and for specific purposes connected with the above project. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied on by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

Memorandum



**To Dylan Workman, Frequency
Project Management**

dylan@frequencyprojects.co.nz

**From Monette Goco/John
Sutherland**

**Our reference 301819 Endeavour
Primary School Buildings A-C-E
147**

Kate Woolley, AECOM

kate.woolley@aecom.com

Office Auckland

Date 13/05/2014

Your Reference 60308850

Subject Endeavour Primary School – Buildings A, C & E

Weathertightness Review of Documents

The Documents

The project received Approval to review on 17 March 2014. The set of drawings issued for **Building Consent** is dated 11 April 2014, and received on 28 April 2014. It consisted of 84 drawings. Of this group, the following were considered relevant and were reviewed:

Drawing/Sheet no.	Description
BUILDING A	
AR-105	Perspectives
AR-110	Ground Floor Plan
AR-114	Roof Plan
AR-130	Elevations
AR-131	Elevations
AR-132	Elevations
AR-140	Sections
AR-141	Sections
AR-142	Sections
AR-143	Sections
AR-144	Sections
AR-145	Sections
AR-146	Sections
AR-150	Roof Details
AR-151	Roof Details
AR-152	Roof Details
AR-153	Roof Details
AR-154	Roof Details
AR-160	Cladding Details
AR-161	Cladding Details
AR-162	Cladding Details
AR-163	Cladding Details
AR-190	Door Schedule
AR-195	Exterior Joinery Schedule
AR-196	Exterior Joinery Schedule
BUILDING C	
AR-305	Perspectives
AR-301	Project Notes

Memorandum



AR-310	Ground Floor Plan
AR-313	Setout Plan
AR-314	Roof Plan
AR-330	Elevations
AR-340	Elevations
AR-341	Sections
AR-342	Sections
AR-350	Typical Details
AR-351	Typical Details
AR-352	Typical Details
AR-353	Typical Details
AR-354	Typical Details
AR-355	Typical Details
AR-360	Window Schedule
AR-361	Door Schedule
BUILDING E	
AR-015	Ground Floor & Roof Plan
AR-030	Elevations
AR-040	Sections
AR-050	Details
AR-051	Details
AR-090	Door Schedule

Summary

We have reviewed the Architectural Drawings issued by AECOM NZ Ltd. resulting in our comments as summarized below. They are set out for discussion, alteration or confirmation. MOE General comments refer to issues that have arisen on most MOE projects and must be complied with if they apply. Project General comments refer to issues that have occurred more than once on drawings within the Project Drawings set.

Please also refer to Drawing Specific comments.

Drawing Reference	Reviewer Comment	Response
MOE General	<p>Air Seal: MOE recommends that the internal air seal around windows and doors be a wet (more compressible) seal rather than an expanding (more rigid) foam seal.</p> <p>However please note that the compatibility between sealant (air seal) and flashing tape can be an issue in that some brands of flashing tapes are not compatible with typical sealants because many commonly used flashing tapes are polymeric products containing bitumen and they do not have any barrier to plasticiser migration from the sealant. To resolve this Danco TD 830 aluminium foil tape may be used in addition to the flashing tape to provide a reliable separating medium.</p> <p>Other sealants may be able to present evidence of</p>	

18 December 2014

Maltbys Ltd

Construction Cost Managers
and Quantity Surveyors

Level 2, Princes Court,
2 Princes Street
PO Box 2176 Auckland 1140

Ph: 09 303 4394 Fax: 09 307 1034
Web: www.maltbys.co.nz

CERTIFICATE OF PRACTICAL COMPLETION OF SEPARABLE PORTION 1 (BLOCK A)

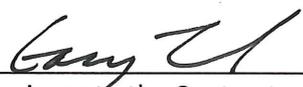
Contractor: Foster Construction Ltd
PO Box 10063
Te Rapa
HAMILTON 3241

Principal: The Secretary for Education

Contract: Endeavour Primary School

1. In accordance with Part B Other Conditions of Contract, amended Clauses 10.4.1 and 10.4.2 of the NZS3910:2003 General Conditions of Contract and Clause 10.4.5 of the Specific Conditions of Contract, the Contractor has advised that Separable Portion 1 of the Contract Works qualifies for the issue of a Practical Completion certificate and has provided the Sixth Schedule Contractor's Producer Statement and the other documentation required by the Contract. A Certificate of Public Use was issued by Hamilton City Council on 5 December 2014.
2. In my role as Engineer to the Contract, I have particularly relied upon the advice of the Design Consultants and also my own observation and hereby certify that Separable Portion 1 of the Contract Works have been inspected and have qualified for a Certificate of Practical Completion on **5 December 2014**.
3. The defects liability period ends on **5 December 2015** for Separable Portion 1 of the Contract Works.
4. As Engineer to the Contract I do not make or give any express or implied representation as to the quality of the work under the control or direction of the Contractor or the Contractor's Design Consultants engaged in the project, and rely on those person's written/oral advice and representations as to the adequacy and quality of the works.
5. In certifying Practical Completion there is no warranty expressly given or implied to any party that I have observed or supervised in detail the construction of the Contract Works and I accept no liability whatsoever for the correct construction of the Contract Works, its compliance with the design documentation or fitness for purpose.
6. Please note that you are required to effect general Public Liability insurance until all work is completed and all defects liability obligations have been met.

Issued by


Engineer to the Contract

29 January 2015

Maltbys Ltd

Construction Cost Managers
and Quantity Surveyors

Level 2, Princes Court,
2 Princes Street
PO Box 2176 Auckland 1140

Ph: 09 303 4394 Fax: 09 307 1034
Web: www.maltbys.co.nz

CERTIFICATE OF PRACTICAL COMPLETION OF SEPARABLE PORTION 2 (BLOCK B)

Contractor: Foster Construction Ltd
PO Box 10063
Te Rapa
HAMILTON 3241

Principal: The Secretary for Education

Contract: Endeavour Primary School

1. In accordance with Part B Other Conditions of Contract, amended Clauses 10.4.1 and 10.4.2 of the NZS3910:2003 General Conditions of Contract and Clause 10.4.5 of the Specific Conditions of Contract, the Contractor has advised that Separable Portion 2 of the Contract Works qualifies for the issue of a Practical Completion certificate and has provided the Sixth Schedule Contractor's Producer Statement and the other documentation required by the Contract. A Certificate of Public Use was issued by Hamilton City Council on 18 December 2014.
2. In my role as Engineer to the Contract, I have particularly relied upon the advice of the Design Consultants and also my own observation and hereby certify that Separable Portion 2 of the Contract Works have been inspected and have qualified for a Certificate of Practical Completion on **5 January 2015**.
3. The defects liability period ends on **5 January 2016** for Separable Portion 2 of the Contract Works.
4. As Engineer to the Contract I do not make or give any express or implied representation as to the quality of the work under the control or direction of the Contractor or the Contractor's Design Consultants engaged in the project, and rely on those person's written/oral advice and representations as to the adequacy and quality of the works.
5. In certifying Practical Completion there is no warranty expressly given or implied to any party that I have observed or supervised in detail the construction of the Contract Works and I accept no liability whatsoever for the correct construction of the Contract Works, its compliance with the design documentation or fitness for purpose.
6. Please note that you are required to effect general Public Liability insurance until all work is completed and all defects liability obligations have been met.

Issued by


Engineer to the Contract

12 March 2015

Maltbys Ltd

Construction Cost Managers
and Quantity Surveyors

Level 2, Princes Court,
2 Princes Street
PO Box 2176 Auckland 1140

Ph: 09 303 4394 Fax: 09 307 1034
Web: www.maltbys.co.nz

CERTIFICATE OF PRACTICAL COMPLETION OF SEPARABLE PORTION 3 (BLOCK C & all siteworks)

Contractor: Foster Construction Ltd
PO Box 10063
Te Rapa
HAMILTON 3241

Principal: The Secretary for Education

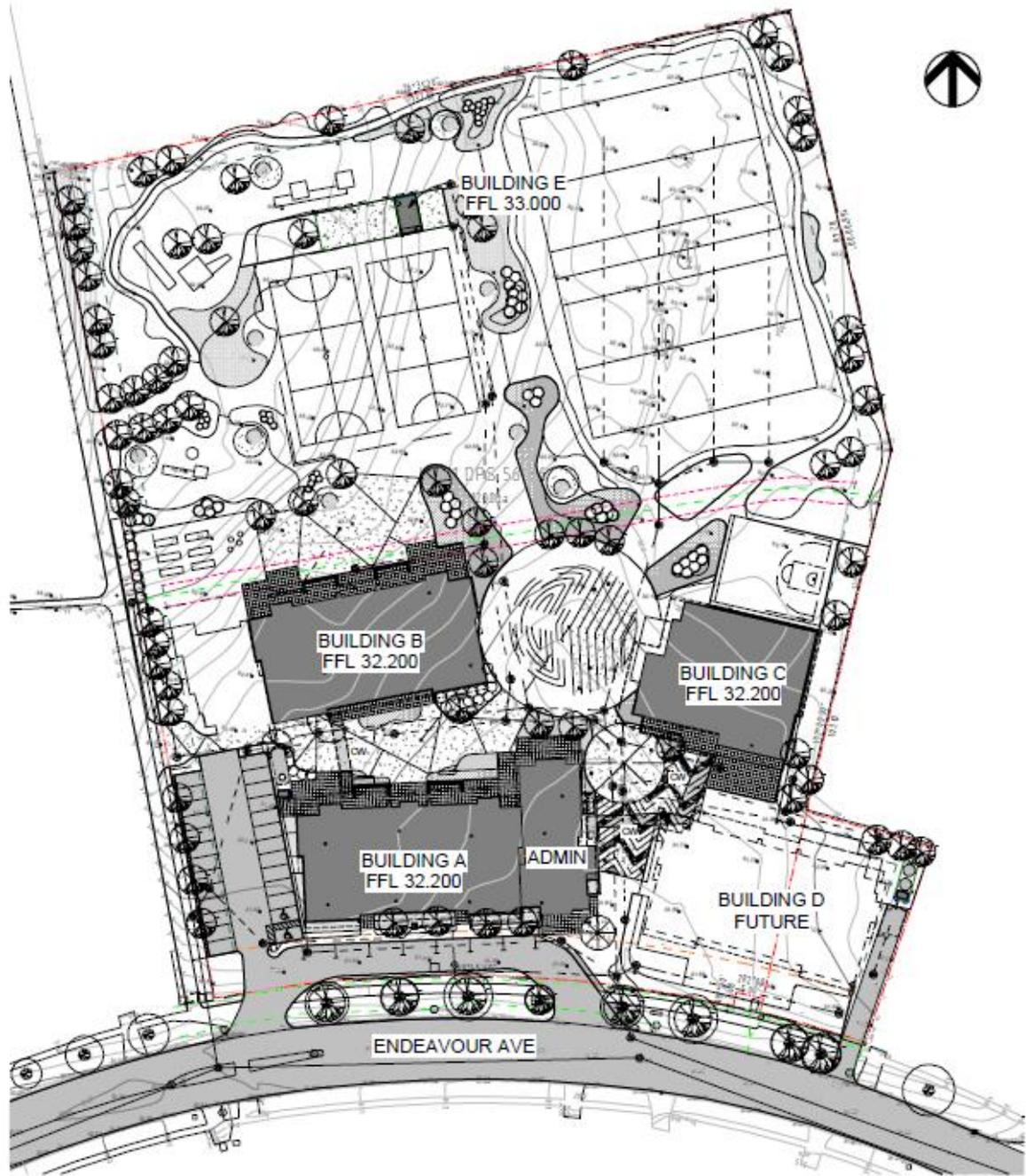
Contract: Endeavour Primary School

1. In accordance with Part B Other Conditions of Contract, amended Clauses 10.4.1 and 10.4.2 of the NZS3910:2003 General Conditions of Contract and Clause 10.4.5 of the Specific Conditions of Contract, the Contractor has advised that Separable Portion 3 of the Contract Works qualifies for the issue of a Practical Completion certificate and has provided the Sixth Schedule Contractor's Producer Statement and the other documentation required by the Contract. A Certificate of Public Use was issued by Hamilton City Council on 13 February 2015.
2. In my role as Engineer to the Contract, I have particularly relied upon the advice of the Design Consultants and also my own observation and hereby certify that Separable Portion 3 of the Contract Works have been inspected and have qualified for a Certificate of Practical Completion on **27 February 2015**.
3. The defects liability period ends on **26 February 2016** for Separable Portion 3 of the Contract Works.
4. As Engineer to the Contract I do not make or give any express or implied representation as to the quality of the work under the control or direction of the Contractor or the Contractor's Design Consultants engaged in the project, and rely on those person's written/oral advice and representations as to the adequacy and quality of the works.
5. In certifying Practical Completion there is no warranty expressly given or implied to any party that I have observed or supervised in detail the construction of the Contract Works and I accept no liability whatsoever for the correct construction of the Contract Works, its compliance with the design documentation or fitness for purpose.
6. Please note that you are required to effect general Public Liability insurance until all work is completed and all defects liability obligations have been met.

Issued by

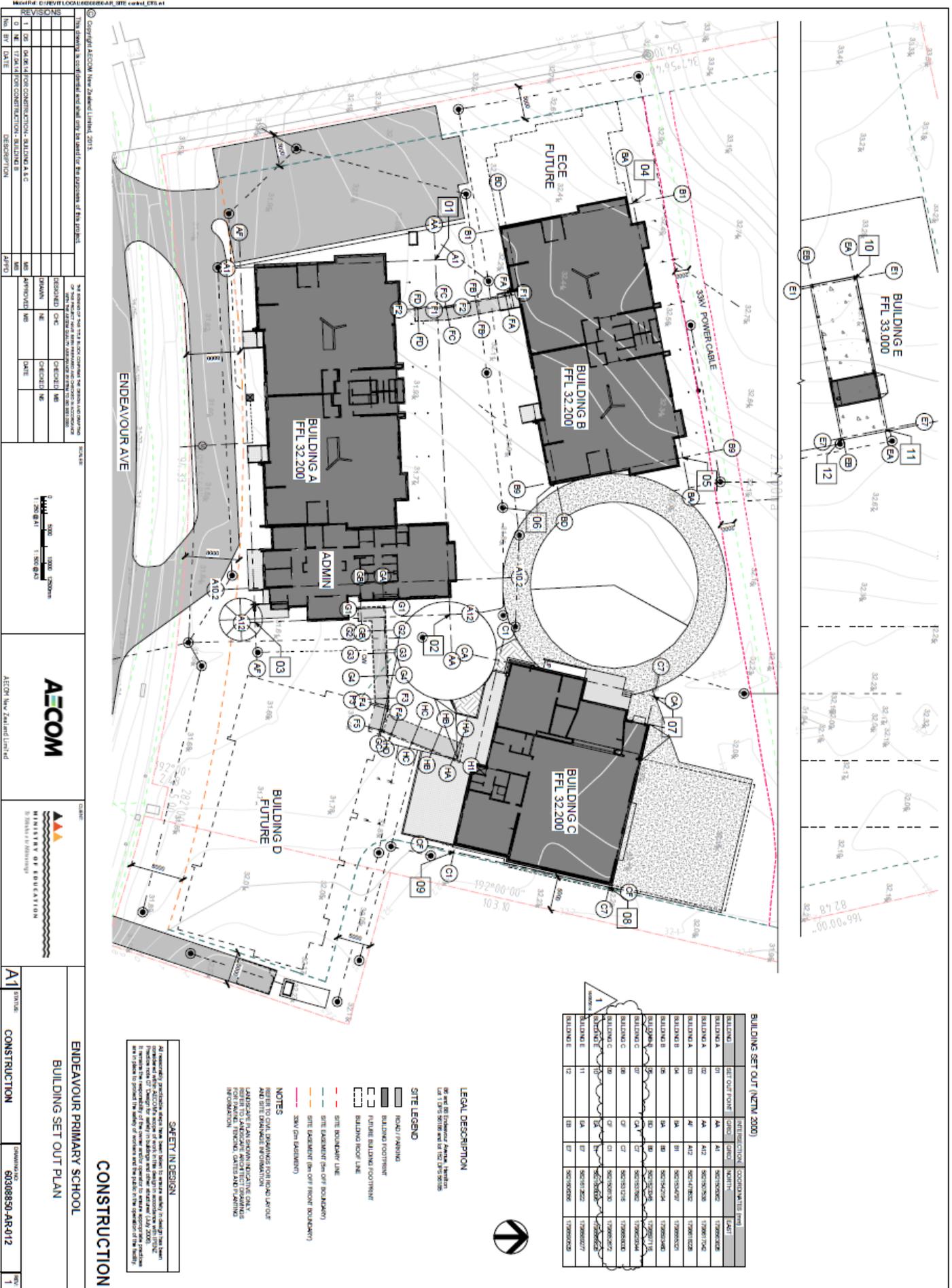

Engineer to the Contract

6.2 DESIGN SITE PLAN



1 OVERALL SITE PLAN - STAGE 1
Scale 1:500 @ A1, 1:1000 @ A3

6.3 DESIGN FLOOR PLANS



REVISIONS

No.	REV.	DATE	DESCRIPTION	APPROV.
1	01	15/08/2012	FOR CONSTRUCTION - BUILDING A & C	ME
2	02	15/08/2012	FOR CONSTRUCTION - BUILDING B	ME

DESIGNED: CHC
CHECKED: MB
APPROVED: ME

AECOM

MINISTRY OF EDUCATION

CONSTRUCTION

ENDEAOUR PRIMARY SCHOOL
BUILDING SET OUT PLAN

DATE: 15/08/2012
PROJECT: 80308850-AR-012

SAFETY IN DESIGN

All reasonably practicable measures shall be taken to ensure the safety of the building and its occupants. The design shall be based on the latest available information and shall be updated as necessary. The design shall be based on the latest available information and shall be updated as necessary. The design shall be based on the latest available information and shall be updated as necessary.

- LEGAL DESCRIPTION**
- Lot 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

BUILDING SET OUT (NZTM 2000)

BUILDING	SET OUT POINT	COORDINATES (M)	MARK
BUILDING A	01	44	41
BUILDING A	02	44	42
BUILDING A	03	44	43
BUILDING A	04	44	44
BUILDING A	05	44	45
BUILDING A	06	44	46
BUILDING A	07	44	47
BUILDING A	08	44	48
BUILDING A	09	44	49
BUILDING A	10	44	50
BUILDING A	11	44	51
BUILDING A	12	44	52

6.4 CLIENT SUPPLIED INFORMATION

Information supplied by MOE – Endeavour School, Hamilton

- New School Assessment Report (Weathertightness) – Mott MacDonald – April 2014
- Floor area assessment sheets for all buildings.
- Architect’s design render of school.
- Design Documentation for Endeavour School
- Endeavour School Maintenance Plan
- Endeavour School Project Management Plan
- Funding and Approval Documentation
- Completion Documentation (CCC, PCU, PCC, HCC planning approval)
- Contract Documentation



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w: www.opus.co.nz