# Knox Home Trust Board

## Current Status: 12 June 2014

**The following summary has been accepted by the Ministry of Health as being an accurate reflection of the** **Partial Provisional Audit conducted against the Health and Disability Services Standards (NZS8134.1:2008; NZS8134.2:2008 and NZS8134.3:2008) on the audit date(s) specified.**

## General overview

A partial provisional audit was undertaken to establish the level of preparedness of Elizabeth Knox Home and Hospital to provide a reconfigured health and disability service.

A new double storey extension with 60 beds has been added to the service, these beds can be used for rest home or hospital level of care (dual purpose). The new extension, ‘Nikau House’, incorporates the Eden Alternative ‘household’ model of care. A household is a human habitat which incorporates the resident, family/whanau, plants, animals and children into the key elements of the design. Nikau House will have four households that comprise of 15 residents each.

At the time of audit the building is at the practical completion stage of construction. Prior to occupancy of Nikau House the service is required to ensure the code of compliance, evacuation scheme and external areas are completed and approved.

# HealthCERT Aged Residential Care Audit Report (version 4.2)

## **Introduction**

This report records the results of an audit against the Health and Disability Services Standards (NZS8134.1:2008; NZS8134.2:2008 and NZS8134.3:2008) of an aged residential care service provider. The audit has been conducted by an auditing agency designated under the Health and Disability Services (Safety) Act 2001 for submission to the Ministry of Health.

The abbreviations used in this report are the same as those specified in section 10 of the Health and Disability Services (General) Standards (NZS8134.0:2008).

It is important that auditors restrict their editing to the content controls in the document and do not delete any content controls or any text outside the content controls.

## **Audit Report**

|  |  |
| --- | --- |
| **Legal entity name:** | Knox Home Trust Board |
| **Certificate name:** | Knox Home Trust Board |

|  |  |
| --- | --- |
| **Designated Auditing Agency:** | The DAA Group Limited |

|  |  |
| --- | --- |
| **Types of audit:** | Partial Provisional Audit |
| **Premises audited:** | Elizabeth Knox Home and Hospital |
| **Services audited:** | Hospital services - Medical services; Hospital services - Geriatric services (excl. psychogeriatric); Rest home care (excluding dementia care); Residential disability services - Physical |
| **Dates of audit:** | **Start date:** | 12 June 2014 | **End date:** | 12 June 2014 |

**Proposed changes to current services (if any):**

The service is adding an additional 60 dual purpose beds (either rest home or hospital level of care) in a new two storey extension to the existing facility. This will increase the services capacity to a maximum of 196 residents.

|  |  |
| --- | --- |
| **Total beds occupied across all premises included in the audit on the first day of the audit:** | 137 |

## **Audit Team**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Lead Auditor** | XXXXXX | **Hours on site** | 7 | **Hours off site** | 4 |
| **Other Auditors** |  | **Total hours on site** |  | **Total hours off site** |  |
| **Technical Experts** |  | **Total hours on site** |  | **Total hours off site** |  |
| **Consumer Auditors** |  | **Total hours on site** |  | **Total hours off site** |  |
| **Peer Reviewer** | XXXXX |  |  | **Hours** | 1 |

## **Sample Totals**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Total audit hours on site | 7 | Total audit hours off site | 5 | Total audit hours | 12 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number of residents interviewed |  | Number of staff interviewed | 10 | Number of managers interviewed | 2 |
| Number of residents’ records reviewed |  | Number of staff records reviewed | 12 | Total number of managers (headcount) | 3 |
| Number of medication records reviewed | 12 | Total number of staff (headcount) | 150 | Number of relatives interviewed |  |
| Number of residents’ records reviewed using tracer methodology |  |  |  | Number of GPs interviewed |  |

## **Declaration**

I, XXXXX, Director of Wellington hereby submit this audit report pursuant to section 36 of the Health and Disability Services (Safety) Act 2001 on behalf of The DAA Group Limited, an auditing agency designated under section 32 of the Act.

I confirm that:

|  |  |  |
| --- | --- | --- |
| a) | I am a delegated authority of The DAA Group Limited | Yes |
| b) | The DAA Group Limited has in place effective arrangements to avoid or manage any conflicts of interest that may arise | Yes |
| c) | The DAA Group Limited has developed the audit summary in this audit report in consultation with the provider | Yes |
| d) | this audit report has been approved by the lead auditor named above | Yes |
| e) | the peer reviewer named above has completed the peer review process in accordance with the DAA Handbook | Yes |
| f) | if this audit was unannounced, no member of the audit team has disclosed the timing of the audit to the provider | Not Applicable |
| g) | The DAA Group Limited has provided all the information that is relevant to the audit | Yes |
| h) | The DAA Group Limited has finished editing the document. | Yes |

Dated Wednesday, 25 June 2014

## **Executive Summary of Audit**

**General Overview**

A partial provisional audit was undertaken on 12 June 2014 to establish the level of preparedness of Elizabeth Knox Home and Hospital to provide a reconfigured health and disability service. A new double storey extension with 60 beds has been added to the service, these are dual purposed beds, which can be used for rest home or hospital level of care. The new extension, ‘Nikau House’, incorporates the Eden Alternative ‘Household’ model of care. A household is a human habitat which incorporates the resident, family/whanau, plants, animals and children into the key elements of the design. Nikau House will have four households that comprise 15 residents each.

At the time of audit the building is at the practical completion stage of construction. Prior to occupancy of Nikau House the service is required to ensure the code of compliance, evacuation scheme and external areas are completed and approved.

**Outcome 1.1: Consumer Rights**

Not applicable to this audit

**Outcome 1.2: Organisational Management**

The service is managed to meet the needs of the younger and older residents requiring rest home and hospital level of care. The service is managed by the chief executive, who is a suitably experienced and qualified registered nurse. The chief executive is supported by a management team.

Staffing will be provided for in each of the four households in the new Nikau House extension. The minimum staffing levels are based on hospital level of care needs of the resident and meet contractual requirements.

The organisation plans to stagger the intake of residents, with the lower level due to be occupied first. The organisation has already completed the recruitment of the nursing staff and has commenced the recruitment process for the care and household support staff. The service has a robust recruitment, orientation and ongoing education programme for the staff and volunteers at the service.

**Outcome 1.3: Continuum of Service Delivery**

The service did not have any areas of required improvement in the continuum of service delivery requiring follow up at this audit.

Safe medicine administration and storage of medicines is observed at the time of audit. Staff that perform medicine management are assessed as competent to perform their role.

The food service is provided by a contracted catering company that prepares and cooks all food onsite. The kitchen manager confirms that there is currently sufficient space, facilities and equipment to cater for the increased resident numbers. There is a planned increase for kitchen staff and food storage/transport boxes to deliver the food to Nikau House. There are small domestic kitchens/serveries in the four households in Nikau House. The kitchen service can meet the needs of residents with special and modified diets and access specialised feeding equipment to meet the residents' needs.

**Outcome 1.4: Safe and Appropriate Environment**

The Eden Alternative philosophy is incorporated into the design of the building. The service is in the final stage of practical completion of a new 60 bed extension, with the final furnishing, decoration, laying of carpets in the hallways and landscaping still to be completed at the time of audit. Nikau House is divided into four 15 resident households. Each of these households has a lounge, dining area, a domestic kitchen and multipurpose spaces. There is a larger central multipurpose lounge/dining/entertainment area on the upper level that can be used for larger gatherings.

There are four double rooms, with all other rooms’ single occupancy. All rooms are of a large size, have built in storage and have an ensuite with a shower, toilet and hand basin. All the toilets in common areas and the ensuite bathroom facilities have disabled access and provide adequate space for the resident, staff and equipment.

The inspection for the Certificate of Public Use is gained for seven of the rooms, though the Code of Compliance for the remaining building is not finalised at the time of audit. The Code of Compliance, approval of the evacuation scheme and ensuring external areas are safe and accessible will be required to be finalised prior to the occupation of the new extension.

There are documented processes for the management of waste and hazardous substances in place. Documented policies and procedures for the cleaning and laundry services are implemented with appropriate monitoring systems in place to evaluate the effectiveness of these services. There are safe and hygienic storage areas for cleaning/laundry equipment and chemicals.

The bedrooms and community areas are of a suitable size and layout for the needs of residents, staff, equipment and furnishings for hospital or rest home level of care. Documented systems are in place for essential, emergency and security services, including a comprehensive disaster and emergency management plan. The lower level is designed to act as a hub for the rest of the service in the event of a civil defence emergency. There is an alternative source of energy to power the utilities during an emergency. Visual inspection of the refurbishment and extension evidences alternative energy and utility sources are maintained. There is an appropriate call bell system installed in the new Nikau House.

**Outcome 2: Restraint Minimisation and Safe Practice**

Not applicable to this audit

**Outcome 3: Infection Prevention and Control**

The organisation’s infection prevention and control policies and procedures, along with the specialist external resources, are implemented by the service and reflect accepted good practice and infection prevention and control principles in care delivery. At the time of audit there are adequate resources to allow for a management of the existing environment which minimises the risk of infection to residents, staff and visitors. The management team and infection control manager report that they will evaluate the increased size and scope of the service to ensure the ongoing infection prevention control needs of the service are met. They report resources will be allocated to ensure the safe and effective implementation of the infection control programme to meet the increased size and layout of the service.

## **Summary of Attainment**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **CI** | **FA** | **PA Negligible** | **PA Low** | **PA Moderate** | **PA High** | **PA Critical** |
| **Standards** | 0 | 13 | 0 | 2 | 0 | 0 | 0 |
| **Criteria** | 0 | 31 | 0 | 3 | 0 | 0 | 0 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **UA Negligible** | **UA Low** | **UA Moderate** | **UA High** | **UA Critical** | **Not Applicable** | **Pending** | **Not Audited** |
| **Standards** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| **Criteria** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |

## **Corrective Action Requests (CAR) Report**

| **Code** | **Name** | **Description** | **Attainment** | **Finding** | **Corrective Action** | **Timeframe (Days)** |
| --- | --- | --- | --- | --- | --- | --- |
| HDS(C)S.2008 | Standard 1.4.2: Facility Specifications  | Consumers are provided with an appropriate, accessible physical environment and facilities that are fit for their purpose. | PA Low |  |  |  |
| HDS(C)S.2008 | Criterion 1.4.2.1 | All buildings, plant, and equipment comply with legislation. | PA Low | The Code of Compliance has not been finalised at the time of audit.  | Ensure Code of Compliance is obtained prior to occupancy.  | Prior to occupancy |
| HDS(C)S.2008 | Criterion 1.4.2.6 | Consumers are provided with safe and accessible external areas that meet their needs. | PA Low | The external areas and courtyards are yet to be fully completed and furnished.  | Ensure the external areas are completed prior to occupancy.  | Prior to occupancy |
| HDS(C)S.2008 | Standard 1.4.7: Essential, Emergency, And Security Systems  | Consumers receive an appropriate and timely response during emergency and security situations. | PA Low |  |  |  |
| HDS(C)S.2008 | Criterion 1.4.7.3 | Where required by legislation there is an approved evacuation plan. | PA Low | The evacuation scheme for Nikau House has not yet gained final approval by the fire service.  | Ensure the evacuation scheme is approved prior to occupancy.  | Prior to occupancy |

## **Continuous Improvement (CI) Report**

| **Code** | **Name** | **Description** | **Attainment** | **Finding** |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

# NZS 8134.1:2008: Health and Disability Services (Core) Standards

## **Outcome 1.2: Organisational Management**

Consumers receive services that comply with legislation and are managed in a safe, efficient, and effective manner.

#### Standard 1.2.1: Governance **(**HDS(C)S.2008:1.2.1)

The governing body of the organisation ensures services are planned, coordinated, and appropriate to the needs of consumers.

ARC A2.1; A18.1; A27.1; A30.1; D5.1; D5.2; D5.3; D17.3d; D17.4b; D17.5; E1.1; E2.1 ARHSS A2.1; A18.1; A27.1; A30.1; D5.1; D5.2; D5.3; D17.5

**Attainment and Risk:** FA

**Evidence:**

Elizabeth Knox has a well-developed strategic plan with key goals linked to quality, service development, facility and site development and other core areas. The Trust Board members have a mix of clinical and business skills. Sub committees link the management team with the Board members to monitor services and objectives and have responsibility for quality and risk management and investment and planning. Sub committees report back to the chief executive, who is a full voting member of the Trust Board.

The five year strategic plan 2011-2016 includes the purpose, values, scope, direction, and goals of the organisation. The mission statement identifies that Elizabeth Knox Home and Hospital provides care and support across the age and need continuum, working in partnership with residents and family/whanau to support and enable the fulfilment of potential, ensuring life is lived as fully as possible consistent with the principles of the Eden Alternative. The organisation ensures services are planned, coordinated, and appropriate to the needs of the younger and older resident at rest home or hospital level of care. The chief executive reported that the new Nikau House is designed for the needs of the older person (rest home or hospital level of care).

The strategic plan is reviewed bi-annually to establish the achievements for the set goals, with the review dated January 2013 sighted. Along with the strategic plan, the organisation also has an Eden Alternative Action Plan 2014 to 2016 (sighted). This action plan documents the goals, how the goals can be achieved and the timeframes for their implementation.

The organisation is managed by a suitably qualified and experienced person with authority, accountability, and responsibility for the provision of services. The chief executive is a registered nurse (RN) with a current practising certificate. The chief executive has extensive background, experience and qualifications in nursing, social science and management. The chief executive has masters level of qualifications, is a member of an aged care association and an institute for health managers. In the past 12 months the manager has attended and conducted in excess of the contractual eight hours education in the management of aged care services. The chief executive is a trainer for the Eden Alternative, has attended conferences in aged care and full day programmes related to the management and design of care/dementia services. The CEO has gained an international award for leadership.

The chief executive has a position description that includes their authority, accountability, and responsibility for the provision of services. The chief executive reports to the Knox Home Trust Board and is a full voting member of the Trust Board. The CEO is supported by the management team and quality and risk subcommittee, which includes medical specialists.

The Aged Related Residential Care (ARRC) requirements are met.

##### **Criterion 1.2.1.1 (HDS(C)S.2008:1.2.1.1)**

The purpose, values, scope, direction, and goals of the organisation are clearly identified and regularly reviewed.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.2.1.3 (HDS(C)S.2008:1.2.1.3)**

The organisation is managed by a suitably qualified and/or experienced person with authority, accountability, and responsibility for the provision of services.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.2.2: Service Management  **(**HDS(C)S.2008:1.2.2)

The organisation ensures the day-to-day operation of the service is managed in an efficient and effective manner which ensures the provision of timely, appropriate, and safe services to consumers.

ARC D3.1; D19.1a; E3.3a ARHSS D3.1; D4.1a; D19.1a

**Attainment and Risk:** FA

**Evidence:**

During a temporary absence a suitably qualified and/or experienced person performs the manager's role. The care director and an accountant cover the role of the chief executive during temporary absences. The chief executive reports they have full confidence in the care director and accountant to fill their role during temporary absences.

The ARRC requirements are met.

##### **Criterion 1.2.2.1 (HDS(C)S.2008:1.2.2.1)**

During a temporary absence a suitably qualified and/or experienced person performs the manager's role.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.2.7: Human Resource Management  **(**HDS(C)S.2008:1.2.7)

Human resource management processes are conducted in accordance with good employment practice and meet the requirements of legislation.

ARC D17.6; D17.7; D17.8; E4.5d; E4.5e; E4.5f; E4.5g; E4.5h ARHSS D17.7, D17.9, D17.10, D17.11

**Attainment and Risk:** FA

**Evidence:**

Professional qualifications are validated, including evidence of registration and scope of practice for service providers. The annual practising certificates (APC) for those staff that require them are sighted. It is suggested that both sides of the nurses APC be copied, as the reverse side documents the scope of practice and any restrictions to practice. The electronic time and attendance software system alerts management when the APC’s are due. The records are maintained for contracted staff that require an APC (GPs, podiatrist, pharmacy).

There are processes for the appointment of appropriate service providers to safely meet the needs of the residents. Recruitment processes include essential and desirable criteria, based on position descriptions. The selection process includes the review of the application and those who meet the essential criteria are short listed, there are panel interviews which include a resident on the interviewing committee. The service has conducted individual and group interviews, which include a range of interactive activities. The organisation also has a recruitment process for volunteers.

New service providers receive an orientation/induction programme that covers the essential components of the service provided. There will be a two week orientation for all new staff at the Nikau House. There are some senior and key positions filled by existing staff, with the majority of nursing, care and support staff being new recruits to the organisation. The orientation covers the essential components of the service, Eden Alternative training, working alongside other staff and communication workshops with resident involvement

The resident involvement involves the 'resident’s books' and the resident story and communication. The residents provide feedback on what is important to them. There are learning circles with residents to assist in building rapport and making the residents and staff feel 'more at ease' in the new environment.

There is a system to identify, plan, facilitate, and record ongoing education for service providers to provide safe and effective services to consumers. There is a yearly education plan, where in-service education is run weekly. Online education is also offered for aged care service providers. There are attendance sheets for face to face and online learning and a worksheet that is completed and recorded for many of the online courses. The attendance sheets and worksheets are documented in training records and the individual staff member’s file.

The service currently has one nurse educator rostered three days a week, with an additional nurse educator to be employed with the opening of the new extension. The service runs the Aged Care Education (ACE) programme for the care staff that do not have a national qualification in aged care. There is also ongoing education for the volunteers.

The relevant ARRC requirements are met.

##### **Criterion 1.2.7.2 (HDS(C)S.2008:1.2.7.2)**

Professional qualifications are validated, including evidence of registration and scope of practice for service providers.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.2.7.3 (HDS(C)S.2008:1.2.7.3)**

The appointment of appropriate service providers to safely meet the needs of consumers.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.2.7.4 (HDS(C)S.2008:1.2.7.4)**

New service providers receive an orientation/induction programme that covers the essential components of the service provided.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.2.7.5 (HDS(C)S.2008:1.2.7.5)**

A system to identify, plan, facilitate, and record ongoing education for service providers to provide safe and effective services to consumers.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.2.8: Service Provider Availability  **(**HDS(C)S.2008:1.2.8)

Consumers receive timely, appropriate, and safe service from suitably qualified/skilled and/or experienced service providers.

ARC D17.1; D17.3a; D17.3 b; D17.3c; D17.3e; D17.3f; D17.3g; D17.4a; D17.4c; D17.4d; E4.5 a; E4.5 b; E4.5c ARHSS D17.1; D17.3; D17.4; D17.6; D17.8

**Attainment and Risk:** FA

**Evidence:**

There is a clearly documented and implemented process which determines service provider levels and skill mixes in order to provide safe service delivery. The staff levels are based on safe staffing levels for hospital level of care. The Household Model will be used in Nikau House for the allocation of staffing. Each household will comprise 15 residents and three care partners (health care assistants). Members of the wider Elizabeth Knox household support and health teams will provide advice, services and assistance to promote the health and wellbeing of the residents (eg, GP, administration, occupational therapy, laundry, gardener, hairdresser, podiatrist, physiotherapist, life enhancer (activities/occupational therapist), homemaker, volunteers and maintenance). The service has clearly defined senior nursing roles and responsibilities. These include the care director, who oversees the life of the community and the delivery of the nursing services. The role of clinical mentor is developed to provide expert nursing care to two or more of the households, manage the delivery of nursing to the households and coach the care partners (caregivers) and RNs. The organisation plans to have a clinical mentor for each of the two levels of Nikau House. Nikau House will have a care educator to identify the training needs of the care team and delivery group and one to one education and training.

The organisation has commenced recruitment for level one of the new extension. The service has already recruited the mentor and nursing staff for level one. The planned recruitment for the care partners (caregiving staff) is planned over the coming weeks.

The proposed roster and staff allocation per shift per household (maximum of 15 residents) documents:

- day shift: Monday to Friday there will be three care partners (caregivers) with a clinical mentor (RN) and a house maker for two households (maximum of 30 residents). On the weekends there will be a RN instead of the clinical mentor role.

- afternoon shift: two care partners for each of the 15 resident households and one registered nurse (RN) for two households (30 residents)

- night shift: one care partner per 15 resident households and one RN for the four households (60 residents).

The staffing levels meet the contractual requirements with the DHB. Discussion with the care director regarding the allocation of one RN for the 60 residents on a night shift may not be sufficient, given the layout of the service over two floors. The care director reports that there are additional RNs in the other wings/houses at Elizabeth Knox to provide support if required. The care director reports that the needs of the residents will be assessed to ensure the staffing levels and skill mix meets the residents’ needs, and if required additional staff will be allocated.

The currents staffing is one RN for 30 residents and one caregiver for five residents on morning and afternoon shift. There are additional homemakers (cleaner/domestic worker) and a life enhancer (diversional therapist) for each floor. The service has a physiotherapist, occupational therapy and physiotherapy assistance staff to assist in meeting resident’s needs. The care director reports that the physiotherapy team will have increased hours and increased team members when the services begin in Nikau House.

The relevant ARRC requirements are met.

##### **Criterion 1.2.8.1 (HDS(C)S.2008:1.2.8.1)**

There is a clearly documented and implemented process which determines service provider levels and skill mixes in order to provide safe service delivery.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

## **Outcome 1.3: Continuum of Service Delivery**

Consumers participate in and receive timely assessment, followed by services that are planned, coordinated, and delivered in a timely and appropriate manner, consistent with current legislation.

#### Standard 1.3.12: Medicine Management  **(**HDS(C)S.2008:1.3.12)

Consumers receive medicines in a safe and timely manner that complies with current legislative requirements and safe practice guidelines.

ARC D1.1g; D15.3c; D16.5e.i.2; D18.2; D19.2d ARHSS D1.1g; D15.3g; D16.5i..i.2; D18.2; D19.2d

**Attainment and Risk:** FA

**Evidence:**

There are no medicines stored in Nikau House at the time of the audit. There is a medication storage room on each floor. The care director reports that the current medication system will be used when Nikau House opens and reports that the organisation is investigating other medicine administration systems, though this is yet to be finalised.

At the time of audit the medicines are delivered in pre-packed sachet medicine administration systems. The pre-packed sachets are packed by the contract pharmacy providers and delivered fortnightly to the service. The sachets are checked for accuracy against the medicine order on delivery. At the time of audit the medicine storage system in Totora House is reviewed, as Totora House has a similar layout to those in the new Nikau House. Medicines are stored in locked cupboards in locked treatment rooms. The controlled drugs are stored in a locked safe, two staff sign the register at each administration and a weekly regular stock count is undertaken. The medicine fridge is monitored at least weekly and temperatures are within recommended guidelines.

The 12 of 12 medicine chart reviews identify that the GP reviews medications at a minimum of three monthly and that the date, medicine name, dose, time of administration and any allergies are clearly shown. All medicine charts have each medicine individually prescribed. All sighted signing sheets are fully completed and indicates the initials of who has administered the medication. A signing register is maintained.

All staff who administer medicines are assessed as competent to perform the role. The competency assessment is conducted at least annually.

Standing orders are not sighted at the time of audit.

The organisation has policies and procedures for residents to self-administer medicines if they are assessed as competent to do so.

The ARRC requirements are met.

##### **Criterion 1.3.12.1 (HDS(C)S.2008:1.3.12.1)**

A medicines management system is implemented to manage the safe and appropriate prescribing, dispensing, administration, review, storage, disposal, and medicine reconciliation in order to comply with legislation, protocols, and guidelines.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.3.12.3 (HDS(C)S.2008:1.3.12.3)**

Service providers responsible for medicine management are competent to perform the function for each stage they manage.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.3.12.5 (HDS(C)S.2008:1.3.12.5)**

The facilitation of safe self-administration of medicines by consumers where appropriate.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.3.12.6 (HDS(C)S.2008:1.3.12.6)**

Medicine management information is recorded to a level of detail, and communicated to consumers at a frequency and detail to comply with legislation and guidelines.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.3.13: Nutrition, Safe Food, And Fluid Management **(**HDS(C)S.2008:1.3.13)

A consumer's individual food, fluids and nutritional needs are met where this service is a component of service delivery.

ARC D1.1a; D15.2b; D19.2c; E3.3f ARHSS D1.1a; D15.2b; D15.2f; D19.2c

**Attainment and Risk:** FA

**Evidence:**

The food services are contracted to an external catering company with all food cooked at the facility. The contractor’s kitchen manager interviewed reports that the kitchen is large enough and well equipped to cater for the additional residents. There is a plan to increase the kitchen staff and purchase additional food storage/transport boxes for the safe transportation of food to Nikau House. Each of the four households in Nikau House has a domestic kitchen and will be the servery for the food that is prepared in the main kitchen.

The menu includes a four week rotational menu with summer and winter variations. The menu is last reviewed by a consultant dietitian in May 2014 using guidelines for the older person living in long term care. Dietary profile sheets are completed on admission and are reviewed regularly. Copies of these are held in folders in the kitchen (sighted). The profile identifies residents' additional or modified nutritional requirements, as well as likes and dislikes. Dietary supplements, such as Fortisip, are given by the clinical staff. Special diets include a soft option, diabetic, vegetarian, cultural (eg, Asian) and special considerations for the younger people at the service.

The food service information is comprehensive and covers meal servings, ordering processes, cleaning schedules, kitchen safety and security, safe chemical handling, food hygiene and food/food storage temperatures. A visual inspection of the kitchen evidences compliance against all aspects of food procurement, production, preparation, storage, transportation, delivery, and disposal. Decanted food is dated, kitchen and food storage areas are clean and tidy and documented procedures for food safety are in place. The chef and kitchen assistants complete food safety training and ongoing education through the contracted catering company. Monitoring records available include food temperatures and fridge / freezer temperature recordings for the kitchen and for fridges in resident lounges.

The ARRC requirement is met.

##### **Criterion 1.3.13.1 (HDS(C)S.2008:1.3.13.1)**

Food, fluid, and nutritional needs of consumers are provided in line with recognised nutritional guidelines appropriate to the consumer group.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.3.13.2 (HDS(C)S.2008:1.3.13.2)**

Consumers who have additional or modified nutritional requirements or special diets have these needs met.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.3.13.5 (HDS(C)S.2008:1.3.13.5)**

All aspects of food procurement, production, preparation, storage, transportation, delivery, and disposal comply with current legislation, and guidelines.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

## **Outcome 1.4: Safe and Appropriate Environment**

Services are provided in a clean, safe environment that is appropriate to the age/needs of the consumer, ensures physical privacy is maintained, has adequate space and amenities to facilitate independence, is in a setting appropriate to the consumer group and meets the needs of people with disabilities.

#### Standard 1.4.1: Management Of Waste And Hazardous Substances  **(**HDS(C)S.2008:1.4.1)

Consumers, visitors, and service providers are protected from harm as a result of exposure to waste, infectious or hazardous substances, generated during service delivery.

ARC D19.3c.v; ARHSS D19.3c.v

**Attainment and Risk:** FA

**Evidence:**

Service providers follow a documented process for the safe and appropriate storage and disposal of waste, infectious or hazardous substances that complies with current legislation and territorial authority requirements. Each of the floors in Nikau House has a sluice room, clean and ‘dirty’ storage utility rooms and appropriate facilities for the disposal of waste. The sanitizers are not yet installed in the sluice rooms at the time of audit. There will be access to protective equipment and clothing appropriate to the risks involved when handling waste or hazardous substances. As part of the orientation, waste management, chemical safety and infection prevention and control education will be provided to new staff (orientation plan sighted).

The ARRC requirements are met.

##### **Criterion 1.4.1.1 (HDS(C)S.2008:1.4.1.1)**

Service providers follow a documented process for the safe and appropriate storage and disposal of waste, infectious or hazardous substances that complies with current legislation and territorial authority requirements.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.1.6 (HDS(C)S.2008:1.4.1.6)**

Protective equipment and clothing appropriate to the risks involved when handling waste or hazardous substances is provided and used by service providers.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.2: Facility Specifications  **(**HDS(C)S.2008:1.4.2)

Consumers are provided with an appropriate, accessible physical environment and facilities that are fit for their purpose.

ARC D4.1b; D15.1; D15.2a; D15.2e; D15.3; D20.2; D20.3; D20.4; E3.2; E3.3e; E3.4a; E3.4c; E3.4d ARHSS D4.1c; D15.1; D15.2a; D15.2e; D15.2g; D15.3a; D15.3b; D15.3c; D15.3e; D15.3f; D15.3g; D15.3h; D15.3i; D20.2; D20.3; D20.4

**Attainment and Risk:** PA Low

**Evidence:**

The building is at the final ‘practical completion’ stage of construction. The first seven rooms on the first floor have a Certificate of Public Use. The inspection for the full Code of Compliance is scheduled for 18 June 2014. This Code of Compliance will be required prior to occupancy.

The physical environment minimises risk of harm, promotes safe mobility, aids independence and is appropriate to the needs of the residents. The design of the building has incorporated the Eden Alternative. All rooms are of a large proportions, with most having direct access to the courtyard or verandas. The corridors are wide and fitted with secure hand rails. There is an elevator as well as stairs to provide access between levels. The central elevator has an alternative energy supply and can be used in a power outage. The new building is joined to the existing building via a covered link way with a gently sloping ramp.

The access to and landscaping of the external areas is not fully completed at the time of audit. The organisation is required to ensure these are completed prior to occupancy to ensure residents are provided with safe and accessible external areas that meets their needs.

##### **Criterion 1.4.2.1 (HDS(C)S.2008:1.4.2.1)**

All buildings, plant, and equipment comply with legislation.

**Attainment and Risk:** PA Low

**Evidence:**

The Code of Compliance inspections is scheduled for 18 June 2014.

**Finding:**

The Code of Compliance has not been finalised at the time of audit.

**Corrective Action:**

Ensure Code of Compliance is obtained prior to occupancy.

**Timeframe (days):** Prior to occupancy *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.2.4 (HDS(C)S.2008:1.4.2.4)**

The physical environment minimises risk of harm, promotes safe mobility, aids independence and is appropriate to the needs of the consumer/group.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.2.6 (HDS(C)S.2008:1.4.2.6)**

Consumers are provided with safe and accessible external areas that meet their needs.

**Attainment and Risk:** PA Low

**Evidence:**

The landscaping and the flush thresholds to the external areas are yet to be fully installed at the time of audit.

**Finding:**

The external areas and courtyards are yet to be fully completed and furnished.

**Corrective Action:**

Ensure the external areas are completed prior to occupancy.

**Timeframe (days):** Prior to occupancy *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.3: Toilet, Shower, And Bathing Facilities **(**HDS(C)S.2008:1.4.3)

Consumers are provided with adequate toilet/shower/bathing facilities. Consumers are assured privacy when attending to personal hygiene requirements or receiving assistance with personal hygiene requirements.

ARC E3.3d ARHSS D15.3c

**Attainment and Risk:** FA

**Evidence:**

There are adequate numbers of accessible toilets/showers/bathing facilities conveniently located and in close proximity to each service area to meet the needs of residents. Each room has an ensuite with a shower, toilet and hand basin. All ensuites are designed for disability access and have adequate space for the resident, equipment and staff assistance. There are additional disability accessible toilets near the lounge and dining areas for residents to access. There are separate toilets and shower facilities designated for staff and visitor use.

##### **Criterion 1.4.3.1 (HDS(C)S.2008:1.4.3.1)**

There are adequate numbers of accessible toilets/showers/bathing facilities conveniently located and in close proximity to each service area to meet the needs of consumers. This excludes any toilets/showers/bathing facilities designated for service providers or visitor use.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.4: Personal Space/Bed Areas  **(**HDS(C)S.2008:1.4.4)

Consumers are provided with adequate personal space/bed areas appropriate to the consumer group and setting.

ARC E3.3b; E3.3c ARHSS D15.2e; D16.6b.ii

**Attainment and Risk:** FA

**Evidence:**

Adequate space is provided to allow the residents and staff to move safely around the bedrooms and bed area. All rooms are of a large proportion, which have sufficient space for the bed, any mobility aids and staff. The four shared rooms have sufficient space for two beds/residents and any mobility aids and staff access.

##### **Criterion 1.4.4.1 (HDS(C)S.2008:1.4.4.1)**

Adequate space is provided to allow the consumer and service provider to move safely around their personal space/bed area. Consumers who use mobility aids shall be able to safely maneuvers with the assistance of their aid within their personal space/bed area.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.5: Communal Areas For Entertainment, Recreation, And Dining **(**HDS(C)S.2008:1.4.5)

Consumers are provided with safe, adequate, age appropriate, and accessible areas to meet their relaxation, activity, and dining needs.

ARC E3.4b ARHSS D15.3d

**Attainment and Risk:** FA

**Evidence:**

Adequate access is provided where appropriate to lounge, playroom, visitor, and dining facilities to meet the needs of residents. Each household has a lounge, dinning and kitchen area. All bedrooms are also equipped with a wall mounted television which provides for additional entertainment space in each resident’s room. The upper floor has a larger multipurpose room that can be used for larger gatherings. The upper lounge area can be partitioned for smaller gatherings. There is also access to the existing relaxation, activity and dining areas at Elizabeth Knox. The link way or ‘street’ that connects the existing Elizabeth Knox facilities to the new Nikau House will have a conservatory sitting area, a resident café, hairdressing salon and additional recreational and lounge areas.

##### **Criterion 1.4.5.1 (HDS(C)S.2008:1.4.5.1)**

Adequate access is provided where appropriate to lounge, playroom, visitor, and dining facilities to meet the needs of consumers.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.6: Cleaning And Laundry Services **(**HDS(C)S.2008:1.4.6)

Consumers are provided with safe and hygienic cleaning and laundry services appropriate to the setting in which the service is being provided.

ARC D15.2c; D15.2d; D19.2e ARHSS D15.2c; D15.2d; D19.2e

**Attainment and Risk:** FA

**Evidence:**

The methods, frequency, and materials used for cleaning and laundry processes are monitored for effectiveness. The laundry and cleaning process will be monitored for effectiveness by the external chemical suppliers. The external chemical supplier provides a monthly report. Each of the households have a sluice room and a laundry chute. The laundry will be conducted at the existing laundry.

The household staff have access to designated areas for the safe and hygienic storage of cleaning/laundry equipment and chemicals in designated sluice and utility rooms.

##### **Criterion 1.4.6.2 (HDS(C)S.2008:1.4.6.2)**

The methods, frequency, and materials used for cleaning and laundry processes are monitored for effectiveness.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.6.3 (HDS(C)S.2008:1.4.6.3)**

Service providers have access to designated areas for the safe and hygienic storage of cleaning/laundry equipment and chemicals.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.7: Essential, Emergency, And Security Systems  **(**HDS(C)S.2008:1.4.7)

Consumers receive an appropriate and timely response during emergency and security situations.

ARC D15.3e; D19.6 ARHSS D15.3i; D19.6

**Attainment and Risk:** PA Low

**Evidence:**

The sighted orientation and induction for the new staff for Nikau House includes appropriate information, training, and equipment to respond to identified emergency and security situations. This shall include fire safety and emergency procedures.

There is an approved evacuation plan for the first seven rooms; the final approval of the evacuation plan will be gained prior to occupancy.

Alternative energy and utility sources are available in the event of the main supplies failing. The lower floor of Nikau House is designed to be the ‘hub’ for the rest of the facility in the event of an emergency. There is a backup generator and the central elevator can be used in the event of a power shortage. Nikau House has a mix of solar power, gas heating and an alternative water source of potable and non-potable water. Nikau House has rain harvesting facilities. The kitchen has food supplies and a meal in the event of an emergency.

An appropriate 'call system' is available to summon assistance when required. The call system is fully fitted and operational at the time of audit. All bedrooms, ensuites and communal areas have access to the call system. The system consists of an audible alert, a light above the room and a central panel that displays the room/area where the call bell has been activated.

The organisation identifies and implements appropriate security arrangements relevant to the residents at the rest home/hospital setting. Access control alerts on the external doors indicate when the doors are opened. Security cameras are installed in external areas, the entrance access points and in the hallways. Security doors and intercom at the entrances are linked with the phone system.

The ARRC requirements are met.

##### **Criterion 1.4.7.1 (HDS(C)S.2008:1.4.7.1)**

Service providers receive appropriate information, training, and equipment to respond to identified emergency and security situations. This shall include fire safety and emergency procedures.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.7.3 (HDS(C)S.2008:1.4.7.3)**

Where required by legislation there is an approved evacuation plan.

**Attainment and Risk:** PA Low

**Evidence:**

The evacuation scheme has been updated and approved for the first seven rooms. The evacuation scheme has been submitted to the fire service. The final inspection and approval for the complete building has not yet gained final approval from the fire service, at the time of audit.

**Finding:**

The evacuation scheme for Nikau House has not yet gained final approval by the fire service.

**Corrective Action:**

Ensure the evacuation scheme is approved prior to occupancy.

**Timeframe (days):** Prior to occupancy *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.7.4 (HDS(C)S.2008:1.4.7.4)**

Alternative energy and utility sources are available in the event of the main supplies failing.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.7.5 (HDS(C)S.2008:1.4.7.5)**

An appropriate 'call system' is available to summon assistance when required.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.7.6 (HDS(C)S.2008:1.4.7.6)**

The organisation identifies and implements appropriate security arrangements relevant to the consumer group and the setting.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

#### Standard 1.4.8: Natural Light, Ventilation, And Heating  **(**HDS(C)S.2008:1.4.8)

Consumers are provided with adequate natural light, safe ventilation, and an environment that is maintained at a safe and comfortable temperature.

ARC D15.2f ARHSS D15.2g

**Attainment and Risk:** FA

**Evidence:**

Areas used by residents and staff are ventilated and heated appropriately. Each of the lounge areas has a gas fire place and air-conditioning system. There are also wall mounted gas radiators in each resident’s room and wall mounted electric heating in the ensuite.

All resident-designated rooms (personal/living areas) have at least one external window of normal proportions to provide natural light. Most of the rooms have a ranch sliding door of access to the courtyard or veranda areas, which provides adequate light and ventilation. There are windows of large proportions for the rooms that do not have a ranch sliding door. They are fitted with security stays.

The ARRC requirements are met.

##### **Criterion 1.4.8.1 (HDS(C)S.2008:1.4.8.1)**

Areas used by consumers and service providers are ventilated and heated appropriately.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 1.4.8.2 (HDS(C)S.2008:1.4.8.2)**

All consumer-designated rooms (personal/living areas) have at least one external window of normal proportions to provide natural light.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

# NZS 8134.3:2008: Health and Disability Services (Infection Prevention and Control) Standards

#### Standard 3.1: Infection control management **(**HDS(IPC)S.2008:3.1)

There is a managed environment, which minimises the risk of infection to consumers, service providers, and visitors. This shall be appropriate to the size and scope of the service.

ARC D5.4e ARHSS D5.4e

**Attainment and Risk:** FA

**Evidence:**

The senior management are assessing the infection control needs when the new facility is operating to review if any additional infection prevention and control resourcing is required. Nikau House will have a nurse educator, who will be involved in infection prevention and control education.

The infection control manager provides a monthly report to the care director, who in turn reports to the chief executive and the Trust Board. The infection control manager has dedicated time for the role. The infection control committee is made up from representatives across all areas of service delivery. Though there is a separate infection control committee, the committee meeting is run jointly with the health and safety team. The infection control committee meets monthly with the health and safety committee.

Each home has a reporting sheet for infections. Residents with new infections are reported at handover. Concerns are reported immediately (eg, if the resident requires isolation). The household team and maintenance workers are also involved in the communication when there are outbreaks.

The organisation has a clearly defined and documented infection control programme that is reviewed at least annually. The infection control programme was last reviewed in September 2013. The review is recorded in the footer of the infection control programme policy. The programme review policy documents the review and includes the infection control programme objectives, general surveillance requirements, staffing, education and the residents’ environment. The annual review of the infection control programme could be further strengthened through a more detailed analysis and evaluation of how the infection control programme goals are met.

There are policies and procedures to ensure staff and/or residents and visitors suffering from, or exposed to and susceptible to, infectious diseases should be prevented from exposing others while infectious. There is a staff health policy that requests staff not to come to work if they are infectious, which includes exclusion time and when staff can return to work after an infection. When applicable transmission based precautions are implemented for residents with infectious diseases. The organisation runs an influenza vaccination programme for staff and residents. The staff are provided with options for hepatitis B vaccinations.

The ARRC requirements are met.

##### **Criterion 3.1.1 (HDS(IPC)S.2008:3.1.1)**

The responsibility for infection control is clearly defined and there are clear lines of accountability for infection control matters in the organisation leading to the governing body and/or senior management.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 3.1.3 (HDS(IPC)S.2008:3.1.3)**

The organisation has a clearly defined and documented infection control programme that is reviewed at least annually.

**Attainment and Risk:** FA

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*

##### **Criterion 3.5.7 (HDS(IPC)S.2008:3.5.7)**

Results of surveillance, conclusions, and specific recommendations to assist in achieving infection reduction and prevention outcomes are acted upon, evaluated, and reported to relevant personnel and management in a timely manner.

**Attainment and Risk:** Not Audited

**Evidence:**

**Finding:**

**Corrective Action:**

**Timeframe (days):**  *(e.g. for 1 week choose 7, for 1 month choose 30, for 6 months choose 180, etc.)*