Knowl Park House
Design & Access Statement

Dementia Daycare Centre & Centre of Excellence

CONTENTS

INTRODUCTION

1.1 PROJECT BACKGROUND

SITE ADDRESS

Knowl Park House
Crowlees Road,
Mirfield
WF149PP

The Council are to remain in the business of owning and managing the provision of Dementia Day Care and will retain the provision of 25 day care places in the North, at Knowl Park House, Mirfield, The site is a former residential care unit constructed during the 1950s and 1960s. The building is two storey and is suffering from deterioration and is expensive and difficult to maintain. In addition, the heating and general maintenance costs are increasing and are inefficient in some areas.

The current layout of the site reflects its former residential status which is not ideally suited to the management and provision of dementia day care. To adapt to the changing needs and demands of dementia day care, and to provide services appropriate for the 21st century it is essential to seek total replacement of the building with a more modern facility with appropriate construction. This supports the commitment of the Council to retain these services in-house for the foreseeable future and will enable the experienced and skilled staff to deliver the best quality care in appropriate environments.

1.2 BRIEF

A 25 place daycare centre and a training and demonstration Centre of Excellence.

This is achieved by the following:

Daycare Centre
This will see development of a single storey 25 place day for visiting service users to meet the University of Stirling Gold standard in dementia friendly design.
The design includes for four distinctive zones which are important to Kirklees

- Home Therapy Zone
- Wellbeing Zone
- Arts & craft Zone
- Garden Zone

There will also be Staff and welfare facilities, dining and kitchen areas, as well as general amenities for the services users., such as toilets and hygiene rooms.

Centre of Excellence

- Extensive staff and visitor training accommodation
- Assisted Technology area to showcase the latest technology.
- A demonstration bungalow.

SUMMARY

1. SITE AREA

The current facility lays on a site of 5,300m^2.

The existing site was under utilised, with large expansive grassed area to the front of the site. There was also a disjointed approach to services users drop-off and staff car parking areas on the existing site, so we have proposed a rationalised approach to resolve this issue and thus created a more efficient use of the site. The building was designed to maximize the service users garden space which is very important. The is also some existing trees at the front of the site which are to be retained and the proposals take into consideration.

2. THE SOLUTION

A new build 25 place daycare facility with four speciialised zones to ensure the comfort of the service users. Together with the Centre of Excellence and demonstration bungalow and supporting rooms to ensure a state of the art facility for the community.

AIMS & OBJECTIVES

3.1 AIMS & OBJECTIVES

The aim of the scheme is to create a purpose designed day care centre and centre of excellence for dementia sufferers, their families and carers to learn about dementia, and how they can adapt their own surroundings to adjust and live with daily life challenges. The Day centre will provide valuable surroundings and activity spaces for individuals and small groups. This will focus on four key areas; Home Therapy, Craft and activities, Wellbeing and Garden. These zones will create a variety of spaces in order to engage in activities.

The building and garden will provide facilities for the local population of Mirfield to engage with vital care services, maintaining an existing service with improved facilities.

Existing site aerial image

SITE STRATEGY

4.1 EXISTING FACILITY

The site is a former residential care units constructed during the 1950s, and is two storey. The building is suffering from deterioration and are expensive and difficult to maintain. In addition the heating and general maintenance costs are increasing and are inefficient in some areas.
The current layout reflects their former residential status which is not ideally suited to the management and provision of dementia day care. To adapt to the changing needs and demands of dementia day care, and to provide services appropriate for the 21st century it is essential to seek total replacement of the buildings with more modern and appropriate construction.

Total external gross floor area (approximation)
Ground Floor 1001msq
First Floor (402msq)
Total = **1403msq**

SITE CONTEXT

The West:- Knowl Park – generally an open park area

The North- A multi-use games area in the main Park and also some recent residential development with a fence between.

The East- Established residential zone

The South- Established residential zone

ROUTES & GATEWAYS

Crowlees Road / Parker Lane creates a circular routes linking to Huddersfield Road with great public transport links for staff.

SITE ACCESS

There is a defined vehicle access and pedestrian routes off of Crowlees Road. The majority of site parking split between the west and south of the building. Both carparks are tight and the road to the West of the building, does not enable any passing of vehicles.

Existing site analysis

SITE STRATEGY

4.2 SITE CONSTRAINTS

THE SITE

The site at Knowl Park house is an existing facility with a number of courtyards and small external spaces which will be cleared to allow for a new building, parking and gardens.
The topography of the site is generally level with a gradual slope down from North to South with localised level changes to the East and South with a retaining wall to the Southern boundary.

ACCESS

There is one vehicle access road off Crowlees Road. There is a main pedestrian access route through the site at the South to the main entrance.

BOUNDARIES

West, North and East boundaries have an existing fence within a mature hedge row. Up to 2m high. This offers a natural secure line to the most vulnerable parts of the site. The front of the site is open and visible from the street., is has low stone wall to the boundary and the site slopes up to the main building.

EXISTING TREES

A small number of existing mature trees are located within the centre of the site, close to the existing buildings and along the main Crowlees Road frontage. However, those that pose a further potential constraint are those located off site around the entire periphery. Our proposals will take these on board, including avoiding the root protection areas. The front of the site has some mature trees which offer some visual privacy and create a nice setting for the building.

MICRO CLIMATE

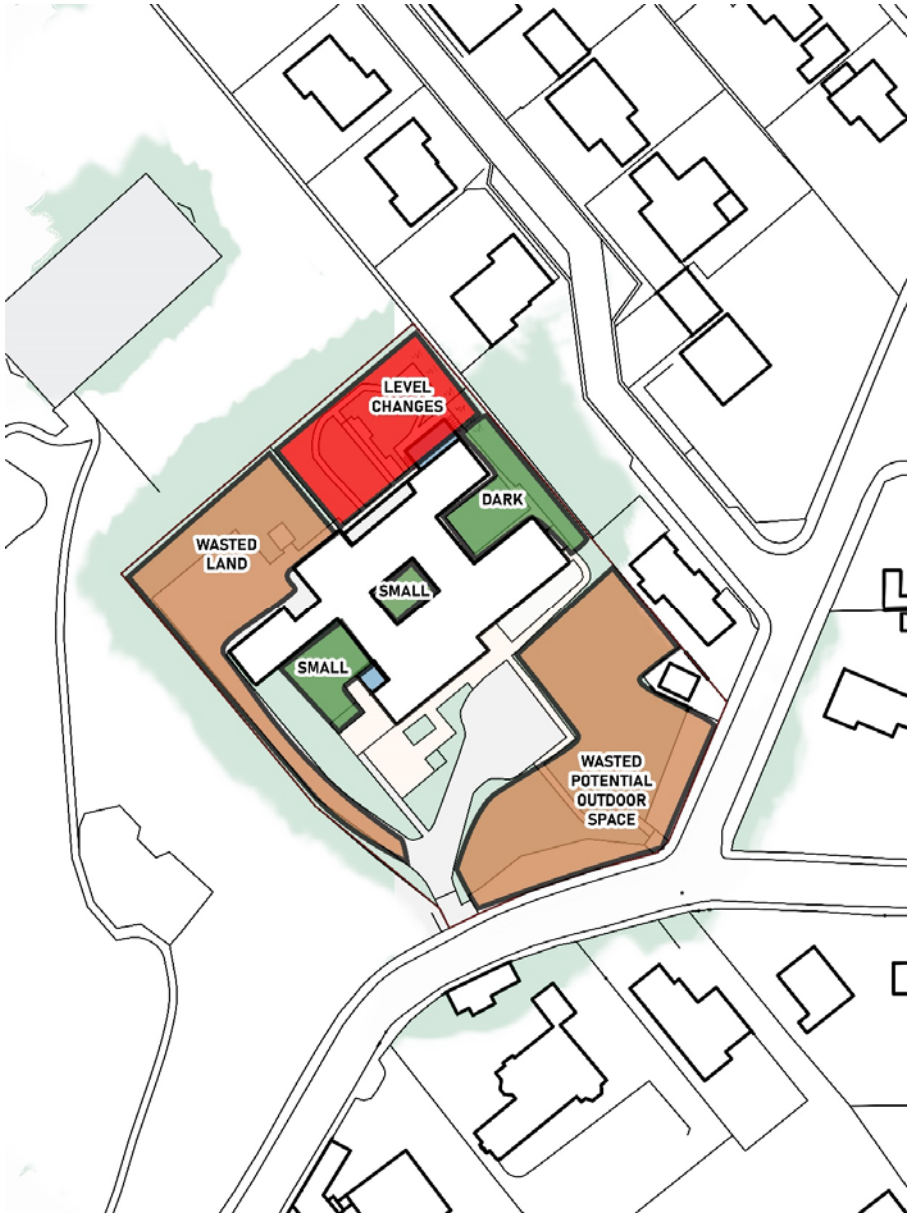
The site orientation allows for sunlight to penetrate the majority of the site all year long. However, the large poplar trees do obstruct some sunlight in the afternoon at certain parts of the year.
Existing planting and trees protect the site from sweeping winds.

GARDENS & EXTERNAL SPACE

The existing building is arranged in such a way that the gardens and external spaces are completely fragmented. With lots of smaller spaces, which do not have natural surveillance, are dark due to no direct daylight or sunlight. Are overgrown with grass or planting, have changes in levels which make them difficult to navigate by services users. One of the aims of the proposals will be to address these issues.

SITE POTENTIAL

The ability to maximize the outdoor green spaces for service users is paramount for their well-being. Together with the ease of accessibility for the service users from the moment they step off of the mini buses.



Existing site use analysis

SITE STRATEGY

4.2 SITE CONSTRAINTS

Knowl Park House site entrance Crowlees Road

Trees on Crowlees Road

Trees to Crowless Road, access road and footpath

Trees and hedge to western boundary

SITE STRATEGY

Existing Knowl Park House building (rear gardens)

Existing Knowl Park House building (rear car park)

Existing Knowl Park House (front car park)

Existing Knowl Park House building (rear gardens)

BUILDING STRATEGY

5.1 BRIEF DEVELOPMENT

The brief outlines the requirements for a 25 place daycare centre and a training and demonstration Centre of Excellence.

This scheme includes, Daycare Centre with four distinctive zones which are important to Kirklees, a Home Therapy Zone, a Wellbeing Zone, an Arts & craft Zone and a Garden Zone. There will also be Staff and welfare facilities, dining and kitchen areas, as well as general amenities for the services users., such as toilets and hygiene rooms.

The Centre of Excellence will include, an Extensive staff and visitor training accommodation, an Assisted Technology area to showcase the latest technology and a demonstration bungalow.

The brief for both facilities was developed during a series of Client Engagement Meetings with the Adult Services team, Kirklees Procurement team, as well as input from Stirling University Dementia Care development Centre (DCDC).

5.2 DESIGN RESPONSE

The original site and design brief were superseded soon after award of the project. The briefing document 'Adult Social Care Capital Programme Commission for Redevelopment of the Knowl Park House Site version 1.3 July 2020' was tested with the Adult Services Team.

Initial Client meetings gave us an understanding of the brief, their vision and the aspiration for a modern, contemporary approach to dementia day care.

Some of the Clients requirements and guiding principles were as follows

- Private and Services User Spaces
- Beautiful gardens
- Flexibility
- Permitting wandering routes
- Creating calm
- Protected (secure) precinct

It became clear early from the brief and discussions with the Client early on in the process that the design of the day care centre needed to hang around the four zones. We produced an organisation and adjacencies diagram for the first Client Meeting, which was put together from the Client brief. This led to the various iterations of the layout.

BUILDING STRATEGY

5.3 DESIGN DEVELOPMENT

The proposed development is intended to provide a day care setting for people with dementia, as well as helping family members with advice and showing various assistive technologies available within a demonstration building.

The building will be zoned into 3 main areas; these being the day care facility, centre of excellence and demonstration bungalow.

The day care facility will be zoned into themed areas to give the users a variety of activities to stimulate and assist with their dementia

The hours of use are to be confirmed for the day care centre, with the staff facilities and centre of excellence open outside of the day care centre with hours to be confirmed.

The proposal is for a single storey building with around 1295m² (GEA) to accommodate the required day care facilities, staff administration, centre of excellence and demonstration bungalow.

The layout is driven by a desire to maximise the use of the site for the building, external landscaping as well as providing staff and visitor parking and delivery access.

The building is oriented to respond to the site boundaries, providing separate entrances to the various building functions which is a key factor for the client. Providing the users with a suitable internal and external environment in order to enhance their experience.

The main user entrance is located to the western side of the building to make use of the minibus drop off and turning facility. The centre of excellence and demonstration bungalow are each access from the southern side of the building adjacent to the parking area.

The northern area of the site is dedicated to the service users providing a landscaped area.

The scale of the buildings suits the residential location and the small nature of the accommodation.

The building is a ‘C’ shaped layout in plan measuring approximately 45m wide x 45m long, with a height of 3.9m to the eaves and 6.2m to the ridge. The massing will be broken down with a number of pitched roofs, varying in height depending on the function of the space, with the entrances and large communal areas being more dominant.

BUILDING STRATEGY

5.4 PLANS

The layout continued to develop through discussions with the client team, reducing the length of corridors to assist users navigating the building. Ensuring the building could be segregated if required into zones for infection control ensuring all zoned have toileting facilities.

BUILDING STRATEGY

5.5 SITE ORGANISIATION

The aim for the site masterplan was to resolve the current drop-off and car parking issues by designing a safe, secure, and accessible drop-off and car parking arrangement. During the first meetings a number of options were reviewed which included full min-bus drop-off and car parking at the front of the building, as well as a separate min-bus drop-off and turning area on the West of the site with staff car parking at the front of the site.

It became clear fairly quickly that the favoured solution was the separate drop-off area, for a number of reasons:

- Complete separation of mini-buses and services users from staff and visitors.
- Mini-bus drop off facility allows for easy and quicker access into the DCC. (which was why the entrance was located on the West)
- The separate access road allows for other vehicles such as deliveries, refuse, fire engines, ambulances etc to have easy access in and out of the site.
- Better supervision of SUs Less congestion on site
- Less confusion when a visitor comes to site.

One area that required resolution was the existing vehicle access which was narrow and did not allow vehicles to pass. Various options were looked at.

Widening the access road within the existing site boundary and removing a mature Oak was viewed as undesirable as the tree has good amenity value and was part of the local environment and streetscape; it was preferred the oak be retained.

The other option was to widen the access road towards the park, requiring additional land, which was the favoured option. Consideration of the existing access to the park, was also given, due to its proximity to the existing vehicle access it was felt it should be relocated further away from the vehicle access in order to increase pedestrian safety coming out of the park. A number of locations were reviewed for the new park access, and one was identified further down Crowlees road, which would not affect any of the existing mature trees along the edge of the park. The new park entrance is to be created with a chicane with PPC steel post and rails to prevent children running directly out of the park and into the road.

GARDEN ZONE

The Landscape architect has developed the landscape scheme including the main garden in line with brief as a starting point and in discussions with the Client, having attended all of the larger Client meetings.
Refer to Landscape Section.

PARKING

The Client agreed that 21 car parking spaces would be ideal, especially with an estimated 12-15 staff, which allows for some visitor car parking. The Transport Engineer at HSP will be producing a transport assessment for the Planning Application. The are 2 electric vehicle charging points on site.
There is also a cycle parking facility for up to 16 cycles.

EXTERNAL PLANT

There is an area shown for a sprinkler tank, sprinkler pump housing. These will be located to the top of the turning head, which is out of sight. The exact sizes are to be confirmed by specialists

STIRLING UNIVERSITY (DSDC)

Stirling University have been involved in most of the Client Meetings through the feasibility process. They have also undertaken a Concept Plan Review, and they are fully supportive of the current scheme and it is well on track to achieve the Stirling Gold standard in dementia friendly design.

BUILDING STRATEGY

5.6 MASSING

The facility is a single storey building; however, it was important for the both the Daycare centre and Centre of Excellence to have a larger presence than a typical domestic scale building. The design therefore has a varying scale with a village type aesthetic to reflect the context, but the roofs also allow for the large flexible spaces such as the Home Therapy and Wellbeing zones to be expressed with a slightly larger scale.
The main Daycare centre entrance is formed by the roof which acts as a welcoming arm, and can be seen from the access road into the site.
The Centre of excellence entrance is reflected in a slightly different composition of coloured cladding and glass.

The building has two functions and this has developed the massing and arrangement, with the more public fronting Centre of Excellence, with its strong pitched roof line and full height glazing creating a transparency and visual link. The Day care centre being focused away from the public to prevent distractions to the centre users and allow focus on the activities.

Large amounts of glazing benefit the day centre by providing good amounts of natural light to assist users with poor vision, and allow views out into the garden space and beyond into other activity spaces, encouraging a more active lifestyle during their visit.

Breaking down the massing with higher and lower rooflines assists users in identifying different locations and highlighting the key activity areas

BUILDING STRATEGY

5.7 AESTHETICS & MATERIAL STUDY

ROOFSCAPE

This is the unifying element of the design, with the aim to create the perception of a village from both the public and garden side. The pitches will express the larger zones and entrances. There will also be an overhang which will allow for some protection from the elements when needed, but also offer some shade in the Summer times.

Flat roofs provide an a functional space for plant equipment as well as lowering the visual height of the building from the main garden area along the main circulation routes. This makes it feel more open, and allows sunlight to penetrate the garden.

MATERIALS

The material choice is largely based on the local area with strong vertical emphasis to reflect the organic nature of the site:

- Polyester powder coated aluminium windows and doors with clear glazing and matching, look-alike panels, powder coated spandrel panels. Generally dark grey in colour, with contrasting, coloured doors to key activity spaces within the garden, linking to the internal colour scheme for the zones.
- Facing stone to the external walls reflects the local area, this will be subtly articulated with bands of various coursing heights.
- Terracotta rainscreen cladding (to entrances and zones of the day care centre) in a mix of greys.
- Aluminium roof verge, eaves profile and soffit cladding
- Natural slate roof incorporating PV panels

Basalt Grey
(RAL 7012) - Fascia

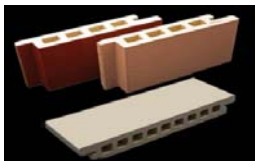
Platinum Grey
(RAL 7036) - Soffit

Alucobond Plus aluminium panels

SIGA 37 500x250mm roof slate

Stone **texture, format and coursing**

Stone **colour**



NBK Terrart terracotta rainscreen cladding

LANDSCAPE STRATEGY

6.1 KEY PRINCIPLES

The proposed landscape has been designed by incorporating the principles set out in the Stirling University guidance 'Designing outdoor spaces for people with dementia' and follows work done at other healthcare and dementia specialist facilities such as Staveley, Derbyshire. These guidelines are referred back to at all stages of the design process to ensure key principles are met.

Key principles for designing outdoor space as set out on the Stirling University website include:

- There should be easy access to garden spaces. Light, easily opened doors and minimal door thresholds make it easier for people to get outside.
- Well maintained paths within the garden help to minimise trip hazards.
- People find handrails for garden paths helpful. Areas for seating are also useful.
- Using contrast on external stairs and steps helps to highlight the change from a flat surface to steps, and using edging materials for paths which contrast with the surrounding area makes paths easier for people to identify and follow.
- Having well-defined paths helps people to find their way around outdoor spaces. The research evidence suggests that free-flowing looped designs are preferred.
- People find garden tools which have been appropriately adapted easier to use. Example adaptations include, e.g. incorporating longer handles, using colour to draw attention to the tool or parts of the tool, having tactile guides.
- It is important for outdoor areas to have appropriate lighting as this helps people to find their way around and encourages use of outdoor spaces. Different types of lighting may be used for different purposes, e.g. lighting under handrails could be used to highlight paths, and security lights could be used to provide widespread light after dark in an outdoor space.
- Contrast can help to highlight both key features and hazards in outdoor spaces. It is important that different contrasts are used so that people can clearly identify which is being highlighted in any given instance.
- Gardens and outdoor spaces which have fences or other physical boundaries help people to avoid accidentally leaving safe areas and being exposed to risks.
- Plants that make interesting sounds, e.g. bamboos and grasses that rustle, or seed pods that pop, and/or those that have pleasant or interesting smells and textures provide people with additional sensory stimulation.
- People like to touch and feel things growing in their gardens so planting schemes which include poisonous plants and those likely to cause skin irritation should be avoided.
- Planting schemes should be based on people's personal preferences, and draw on their memories and experiences.
- Large sections of small plants of the same colour may be easier for people to see than large plants of a single colour.
- Warm colours (such as oranges, reds and yellows) may be easier for people to pick out than cooler colours (such as blues).

SITE CONSTRAINTS & OPPORTUNITIES

Along the southwest and northwest boundaries are tall, mature Lombardy Poplars which cast some shade across the western part of the site; whilst along the eastern boundary there are a group of mature trees which are protected by a Tree Preservation Order (TPO). Care must be taken to avoid the trees and their root protection areas during the design and construction of the new facility, especially the TPO trees.

LANDSCAPE STRATEGY

6.2 CONCEPT & DEVELOPMENT

In collaboration with the Client the design of the main garden or "4th Room" was established through a 'layering' of the design. The first design layer is utilised to establish the basic structure for the garden follows three key principles.

EXISTING SITE CONTRAINTS

Considering and/or avoiding existing constraints such as site levels and existing trees

CREATING ACCESS & MOVEMENT

Creation of a single loop route path interconnecting the entire garden, allowing a complete journey through the space.

CREATING ZONES

Creating different zones in the garden, connected by the loop path, to work in harmony with the building zones. Allocation of the specific dementia care external zones including:

- sensory garden with planting and materials
- allotment space for use by service users
- activity area/ external dining
- large lawn space for service users to maintain and large enough for event tent if required.
- communal seating space
- private/ quiet seating spaces
- outdoor exercise space (outdoor gym equipment)

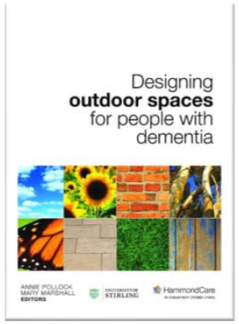
These garden structure principles were then extended to incorporate further principles of dementia design to provide a second layer of design to establish the current feasibility proposals including:

- connections back to the building
- other connections across the garden access to sunlight
- positions for a water feature
- locations of planting beds including sensory planting
- types and location of garden shelter for shade (gazebo, pergola, etc)
- seating around the garden
- location of greenhouse and shed for the allotment
- enclosure and safety
- diving zones with planting, trellis, etc.
- wayfinding features and navigation markers
- removal of changes in level where possible
- level thresholds
- harmony of features and materials with the building design
- handrails where necessary
- staff space

THE DEMONSTRATION BUNGALOW

The design of the garden for the bungalow will be based on simple, safe and attractive low maintenance features. Any path will be constructed of a non-trip, non-slip surface such as resin bound gravel. The main lawn will use an artificial grass in this instance to provide a long

lasting permanently tidy lawn. Shrub beds will be gravel mulched with specimen shrubs growing through ensuring limited maintenance such as weeding being required. The entire garden will be divided from public space by an evergreen hedge which will require twice yearly pruning.



LANDSCAPE STRATEGY

6.3 DETAIL DESIGN

At the next stage of the process BEA Landscape will wok on the final layer which will include the finer design, and potentially most important considerations of the design, and will be applied during the detailed design stages in close consultation with the client. These include:

- selection of materials (colours, non-glare, non-slip, warm to the touch, etc.)
- types of edging details
- selection of planting (sensory stimulation, texture, wildlife attracting, season changes, non-thorny, non-poisonous, etc.)
- types and positions of furniture
- external lighting types and positions
- drainage covers
- types and location of fencing
- signage
- outdoor services (electricity, tap, etc)

The proposed landscaping and site layout are influenced by the existing surrounding perimeter trees and their root protection areas (RPA's) which pose a constraint to the works including the positioning the building, aligning access roads and manipulating site gradients. Car park parking at the front of the site allows for retention of the large boundary trees by utilising a 'no-dig' porous construction within RPA's. The TPO trees along the north-eastern boundary are also protected by this method.

The rear gardens forms the '4th room', and therefore materials and features are shared between building and the landscape creating a harmonious environment. For example the use of stone and timber for dwarf walls and planters reflecting the façade materials of the building.

The garden has been designed in line with best practice guidance 'Designing outdoor spaces for people with dementia' (2012), by Stirling University. The main route around the garden is provided as a 1.5m wide continuous loop path surfaced with an amber resin bound gravel. Supported by handrails, this primary route aids wayfinding and allows a safe hazard free access for all. The gardens around this route are divided into zones separated by planting. Each zones offers specific uses including raised allotment beds; communal and intimate seating areas; external dining & activity tables; a stimulating sensory garden with water feature; external gym equipment with safety surfacing and finished with a central circular mown lawn for that 'cut grass smell' in the summer.

The garden also includes a small 'Pod' building for activities a gazebo for shaded space and a shed and greenhouse allowing gardening activities for service users.

In any dementia garden, planting choices are crucial to ensure the safety of service users. Plants have been selected which first and foremost are non-toxic and without thorns or spines. Plants for sensory stimulation including smell, touch, sight and taste are used throughout the garden but focused in the sensory zone and allotment areas. The inner perimeter of the garden is planted with larger shrub species in front of a mix of native planting but which will be out of reach of service users. These offer a buffer to the neighbouring park while increasing biodiversity within the site.

The site landscaping is to be maintained by a management company on behalf of Kirklees Council and also the day care centre service users as part of their regular activities.

ACCESS

7.1 ACCESS

The site has some noticeable falls for the purpose of inclusive access and it is intended that this will be accounted for in areas where wheelchair access is not required for example in soft landscaped areas.

Access is provided by a widened access road and new footpath from Crowlees Road, and an existing footpath from Crowlees Road/Westfileds road junction.

Level access will be provided from the car park to the two building entrances, and to all other ground floor entrances accessing the building. Two dedicated, accessible parking bays are provided close to the main entrances of the building for visitors and staff. External surfaces will be chosen and lit to facilitate easy and safe access around the building.

A layby drop off point for three minibuses has been incorporated adjacent to the day care centre main entrance as most service users will arrive via this method. This allows direct access from minibus to entrance.

The main entrance doors will be automatic opening, to allow easy access into the building lobby. Inner doors will create a secure zone to the main building, which will prevent unauthorised access and egress for the safety of the users of the centre.

Accessible WC/ shower and hygiene facilities are to be provided throughout the building and is well in excess of the minimum requirement. This includes hoist facilities within the hygiene rooms to facilitate complex user needs including toileting and showering. Additional H frame hoists will be incorporated into key areas of the building to assist moving users in and out of seating.

Doors will be of a suitable width to accommodate users with wheelchair or walking aides, circulation doors will be held open to assist with movement around the building.

Handrails will be provided down the main circulation routes to assist users of the building navigate around.

Seating points are integral with the design of the building to allow users to rest as they transition from one space to another, this also allows quieter spaces for those who require it and a similar principle applies to the garden.

Visual contrast will be provided between the main elements, floor and walls; walls and doors. The exception to this is areas between staff only and service users areas, where doors will blend with the walls to avoid causing distress to service users not being able to open doors to restricted spaces.

Colour schemes will be developed with the client team and DSDC to ensure that they meet the latest standards and recommendations for dementia care facilities, for example limiting visual contrast between flooring of adjacent rooms with no contrasting/shiny floor trims; glazed cupboard doors to areas where service users are expected to use equipment to enable them to locate items more easily. The building will be zoned with colour themes to assist users with navigation around the building, this will be taken onto the garden access doors to identify the zones. Key objects will be strategically located to assist in wayfinding.

Acoustic separation will be incorporated into the wall construction to prevent sound passing from one room to another, with acoustic absorption to limit reverberation within the rooms to create an acoustically comfortable space.

Induction loops will be incorporated into the reception areas, and other key locations where users require, for example the cinema/sensory room.

The kitchenette in the home therapy area will be designed to incorporate lower worktop, kneehole spaces to accommodate wheelchair users, with mid level oven to assist users with baking activities.

The buildings will be designed and constructed in accordance with Building Regulations Approved Document M and BS8300 as appropriate.

8.1 TRANSPORT STATEMENT

Trip Generation and highways impact

A Transport Scoping Study was submitted to Kirklees Council Highways on the 20th of August 2020, which outlined the anticipated trip generation of the proposed development. The forecasted trip rate and traffic generation of the development during the peak hours and throughout the day (weekday) is shown in Tables 1 and 2 below. It is to be noted that the development is a replacement facility and will therefore not generate a material increase in vehicular trips to that of the existing situation.

Table 1: Trip Rate, Dementia Day Care Centre

Time Range		Weekday Trip Rate (per resident)		
		Arrivals	Departures	Two Way
AM Peak Hour	08:00-09:00	0.083	0.029	0.112
PM Peak Hour	17:00-18:00	0.024	0.058	0.082
Daily		0.977	0.951	1.928

Table 2: Traffic Generation, Dementia Day Care Centre

Time Range		Weekday Traffic Generation (25 residents)		
		Arrivals	Departures	Two Way
AM Peak Hour	08:00-09:00	3	1	4
PM Peak Hour	17:00-18:00	1	2	3
Daily		32	30	62

Vehicular and Pedestrian Access Arrangements

It is proposed to upgrade and widen the existing vehicular access on Crowlees Road (which comprises of a footway crossover) from 4 metres (m) in width to 6m. The increased width of access will allow for safer two way vehicle movements in and out of the site, whilst it is also proposed to provide a 2m wide footway (with an associated internal pedestrian crossing point) adjacent to the vehicular access to facilitate safe pedestrian movements to and from the main building. The length of the existing dropped kerbs at the vehicular access is to be extended in light of the proposals.

It is to be noted that the vehicular access arrangement is to remain as a footway crossover given the low frequency of vehicular traffic that is expected at the development throughout both the course of an hourly period and also during the day. Figure 1 presents the proposed vehicular access arrangement onto Crowlees Road, alongside anticipated pedestrian routings to the development. With regards to the latter, it has also been proposed to realign the existing pedestrian footway present (connecting the proposed building entrance to Crowlees Road at the intersection with Westfields Road), with this also being widened to 1.6m to facilitate the safe movements of all pedestrians to and from the main building on-site.

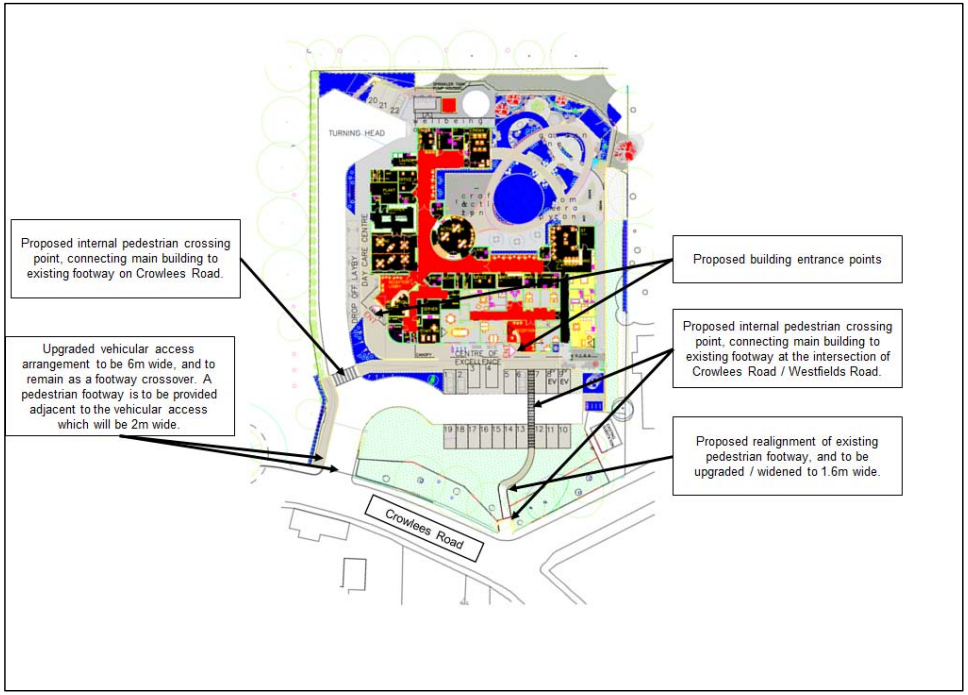


Figure 1: Proposed Vehicular and Pedestrian Access Points

Internal Site Layout

The internal road width is to be 6 metres in principle, with a 5.5m proposed width towards the minibus pick up and drop off layby on-site. Internally, within the site, the proposed carriageway width has been designed based on vehicular tracking and to ensure safe two-way movements of all anticipated vehicles at any one point in time.

Adjacent and to the perimeter of the main building, a hard-standing area (with a maximum width of 5.5m) is to be provided which will be used by all site users when taking access to and from the development. This hardstanding area connects onto the proposed pedestrian footway / footpath connections as explained above.

A circulation plan is highlighted below in Figure 2, demonstrating the on-site facilities proposed and the layout of the site from a transport perspective.

TRANSPORT STATEMENT

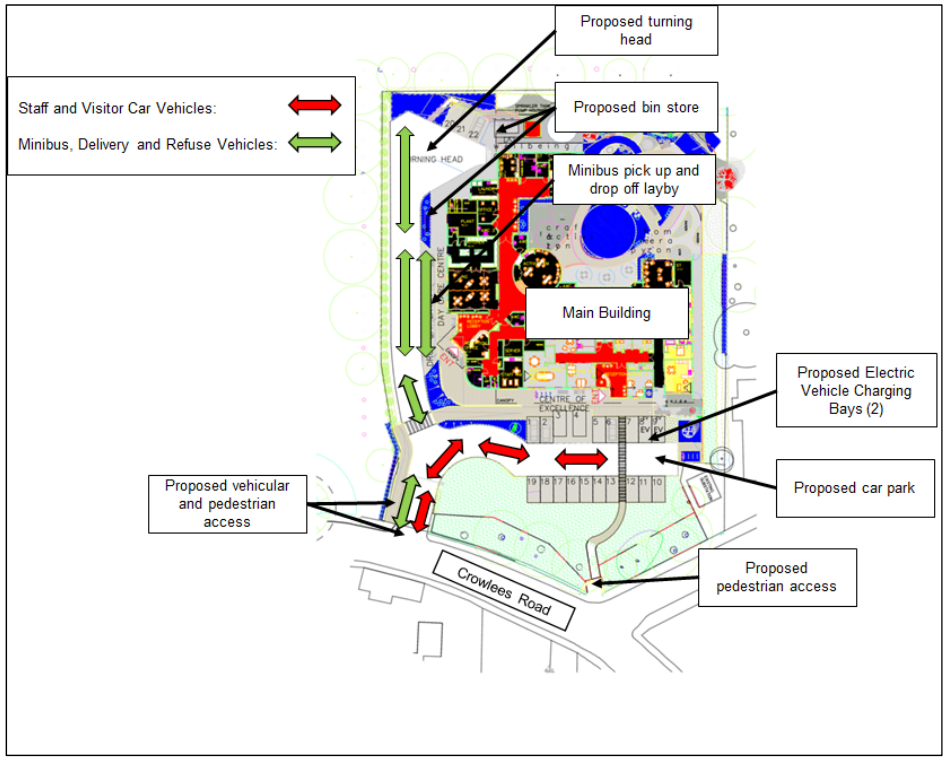


Figure 2: Proposed Site Layout and Circulation Plan

Car and Cycle Parking Provision:

The existing dementia day care centre on-site provides 18 car parking spaces, which is broken down into the following provision:

- 16 Regular Car Parking Spaces;
- 2 Accessible Parking Bays and;
- Delineated parking area for delivery vehicles (up to one delivery vehicle)

The dementia day care centre is to employ a similar number of staff to that of existing with circa 12-15 full time equivalent staff, with a maximum of 12 staff on-site at any one point in time. Based on staff and visitor trips expected and duration of stay, it is proposed to provide the following parking provision:
)

- 20 Regular Car Parking Spaces (2.4 x 4.8m);
- 2 Accessible Parking Bays (2.4 x 4.8m, with a 1.2m refuge to the side and rear)
- 2 Electric Vehicle (EV) Charging Spaces (provided at 10% of total bays);

Minibus Pick up and Drop off Bay (capacity for three minibuses simultaneously

Taking into account the forecasted number of staff to be employed on-site, it is anticipated that there will be a minimum of 5 parking spaces (excluding the accessible parking) which can be used by visitors. Whilst this is the minimum amount of available parking spaces and is based on a worst case scenario approach (assuming that each staff member drives), it should be noted that the actual number of available spaces will be higher to this, with on average 7-8 visitor spaces (excluding the accessible bays) being available for public use; alongside the proposed minibus pick up and drop off layby which can be used for short stay pick up and drop off by the public outside of peak times used by the day care centre.

The proposed minibus layby is to measure 3 metres wide, with a length of 25 metres, and has been tracked by a minibus vehicle in addition to a delivery vehicle (7.5T box van) to demonstrate its workability.

The electric vehicle charging bays are provided in the form of dual charging points, of which the specification will be conditioned accordingly by Kirklees Council post submission of planning application.

It is proposed to provide secure cycle parking (in the form of 8 Sheffield Stands – 16 spaces) adjacent to the pedestrian entrance (to the south of the main building) and in proximity to Parking Bays 9 and 10, which can be used by both staff and visitors. Being situated in close proximity to a pedestrian entrance, the cycle parking will be secure whilst also being step free. The provision of cycle parking at the site will assist to encourage staff and visitors to travel by sustainable modes of transport and lessen reliance on single occupancy vehicle travel to and from the dementia day centre.

Deliveries and Servicing Arrangements:

It is proposed for all deliveries to take access into the site via the upgraded access arrangement on Crowlees Road, and then navigate the internal road network towards the proposed turning head to the north west of the development. Delivery vehicles (anticipated to be 7.5T Box Vans) will then proceed to navigate the turning head via a three-point turn and then load and unload within the proposed minibus pick up and drop off layby. It is anticipated that there will be between 2 to 3 delivery vehicles daily, comprising of kitchen goods and miscellaneous deliveries.

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Similar to delivery vehicles, it is proposed for refuse vehicles to navigate the site via the upgraded vehicular access arrangement, and then proceed to utilise the turning head to enter and exit the site in forward gear. A bin store is to be located in proximity to the turning head; with the refuse vehicle being able to stop and load adjacent to the kerb; and then proceed to exit in forward gear. The proposals intend to formalise the existing arrangement that takes place on-site, whilst it is anticipate that waste collections will take place at a similar frequency to that of existing of circa once a week. The proposed turning head of the development has been designed in line with swept path vehicle tracking, which is demonstrated in the below section.

Swept Path Vehicle Tracking

To inform the design of the site layout, swept path vehicle tracking has been undertaken based on the following vehicles that will take entry into and out of the site.

- DB32 Car Vehicle;
- DB32 Fire Appliance;
- Minibus;
- Ambulance;
- Delivery Vehicle (7.5T Box Van);
- Refuse Vehicle (Phoenix 2-20W With Elite 2 6x4 Chassis as requested by KC Highways)

For reference, **separate drawings below** presents tracking of the above vehicles, demonstrating that such vehicles can enter and exit the site in forward gear successfully

- KPH-HSP-00-00-DR-C-205 - Refuse Vehicle Tracking 1
- KPH-HSP-00-00-DR-C-200 - Car Vehicle Tracking
- KPH-HSP-00-00-DR-C-201 - Fire Tender Vehicle Tracking
- KPH-HSP-00-00-DR-C-202 - Minibus Vehicle Tracking
- KPH-HSP-00-00-DR-C-203 - Ambulance Vehicle Tracking
- KPH-HSP-00-00-DR-C-204 - Delivery Vehicle Tracking 1

Conclusion of Access and Highways Impact

The proposals will have a negligible impact on the local road and highway network as it is effectively a like for like development and traffic generation is less than the threshold for studying the impacts on the wider transport network. The site access for pedestrians and vehicles is being improved and parking will be available on site to ensure there is no overspill to surrounding streets for both staff and visitor vehicles. There are opportunities for staff and visitors to travel by sustainable modes and cycle parking is proposed along with Electric Vehicle charging infrastructure.

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