Project:

Castle Hill Visitors' Centre

Almondbury, Huddersfield HD4 6TA

Document:

Transport Statement

Date:

November 2024

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Introduction

This document is based on the original submission document by Highways Development Control Support Ltd. who were appointed by the Thandi Partnership to prepare a Transport Statement (TS) in support of a new development encompassing a Restaurant, Hotel, Educational / Exhibition Facility and Visitor Centre at Castle Hill, Huddersfield for the planning application previous application 2018/62/93591/W.

The TS incorporates proposed highways improvement in the form of 3 formal passing places along the access road (Byway HUD/171) known as Castle Hill Side that are respectful to the setting of the development from a Historic England aspect.

The TS concludes that the development does not cause any negative impacts in terms of road safety or congestion and is therefore acceptable in planning terms.

Policy Context

Kirklees Council Local Plan PLP 21 Highway safety and access states "Proposals shall demonstrate that they can accommodate sustainable modes of transport and be accessed effectively and safely by all users.

New development will not be permitted if it adds to highway safety problems or, in the case of development which will generate a substantial amount of trip generation, cannot be served adequately by the existing highway network.

Proposals shall demonstrate adequate information and mitigation measures to avoid a detrimental impact on highway safety and the local highway network. Proposals shall also consider any impacts on the Strategic Road Network.

All proposals shall:

a. Ensure the safe and efficient flow of traffic within the development and on surrounding highway network;

b. In locations where development is otherwise considered acceptable, new infrastructure or improvements on or off site may be required to ensure safe access from the highway network to the development site for pedestrians or disabled people, cyclists, public transport users, and private vehicles which will not materially add to highway safety problems or reduce the efficiency of the highway network;

c. Be accompanied by a supporting Transport Assessment or Transport Statement where the development would generate significant trip generation, providing detail as to impact on highway safety, air quality, noise and light restrictions;

d. Take into account changes in site levels and topography to ensure the development can be accessed easily and safely by all sections of the community and by different modes of transport;

e. Take into account the features of surrounding roads and footpaths and provide adequate layout and visibility to allow the development to be accessed safely;

f. Take into account access for emergency, service and refuse collection vehicles;

g. Have provision for electric vehicle charging points within the site layout;

h. Provide on-site safe, secure and convenient cycle parking/ storage facilities to encourage sustainable travel modes.

Kirklees Council Local Plan PLP 22 Parking states "The provision of parking will be based on the following principles:

a. In town, district and local centres, car parks close to the main shopping area will be for short stay use and peripheral car parks for long stay use;

b. Long stay parking in town centres will be reduced progressively in conjunction with improvements to sustainable transport opportunities, where appropriate;

c. Provision of non-residential parking in town centres will not be permitted unless it can be demonstrated that it is required for operational reasons. Where such provision is permitted appropriate arrangements will need to be put in place to provide management arrangements consistent with public parking in the centre;

d. Provision of residential parking schemes within town centres for private/motorcycles/and cycles will be permitted; where appropriate and where schemes can be shown to enhance residential developments in the town centre;

e. Car parking provision in new developments will be determined by the availability of public transport, the accessibility of the site, location of the development, local car ownership levels and the type, mix and use of the development.

f. New developments will incorporate flexibly designed minimum parking spaces for private cars, considering a range of solutions, to provide the most efficient arrangement for safe, secure and visually unobtrusive car parking within the site including a mix of on and off street parking in accordance with current guidance;

g. Provision will be made to meet the needs of cyclists for cycle parking in new developments;

h. Provision will be made to accommodate the needs of disable people for the parking of vehicles.

NPPF para 14 states "At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking"

NPPF para 32 states "All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

• the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;

• safe and suitable access to the site can be achieved for all people; and

• Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

NPPF para 39 states "If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

•the accessibility of the development

•the type, mix and use of development

•the availability of and opportunities for public transport

•local car ownership levels

•an overall need to reduce the use of high-emission vehicle”

This statement considers the proposed development in terms of its location, the proposed use and how it relates to the above highways and planning policy.

This statement concludes the development is acceptable in terms of its impact on the local highway network.

The Site

The hillside site overall is approximately 4 hectares in area currently occupied by a car park that serves visitors to Victoria Tower.

The area is within an area classified as “Ancient Monument” by Historic England / English Heritage.

The site is located between Newsome and Almondbury to the South West of Huddersfield approximately 2.5km from the town centre.

It is accessed off Castle Hill Side where it runs around the south of the site from Ashes Lane forking left from its junction with Lumb Lane climbing up the eastern boundary of the site up to a plateau at the top. Castle Hill Side is recorded as a Byway (HUD/171/20) from Lumb Lane approximately 200m to the top. See the site location plan below:

Source: google map

Existing Highway Network

Castle Hill Side varies in width from 3.7m up to 4.2m in width. There no footways either side of the access road and there is no street lighting. it is recorded as a Byway with vehicle access rights.

There are informal passing areas along the access road where vehicles tend to pass each other but these are not formally marked out.

There are a number of footpaths that surround the site providing pedestrian access from Clough Hall Lane to north, Ashes Lane to the west, Castle Hill Side to the south and Lumb Lane to the east. These footpaths are recorded on the definitive map as public rights of way.

The photo below shows Castle Hill Side heading north as it climbs up to the car park adjacent to Victoria Tower. Note the area of worn edging to the right where vehicles tend to pass each other.

Photo 1 looking north up Castle Hill Side (Byway HUD/171/20)

Personal Injury Collisions

Details of recorded road traffic incidents within the vicinity of the site on Castle Hill Side were requested from CrashMap for the five year period between 2019 and 2024.

The CrashMap is indicated below.

From the data there have been 4 accidents recorded in the last 5 years and only 2 in the vicinity of the site (bottom of the hill) in July 2019 and April 2021; both were recorded as Serious in severity. Each collision appears to have similar characteristics in terms of vehicles colliding at a junction.

Notwithstanding the accident data identified by CrashMap, it is understood there are no specific interventions being planned form Kirklees Road Safety section.

Appendix 1 – CrashMap

The Proposals

The development is the replacement of the original Castle Hill Pub that was demolished circa 2005.

The proposed development will consist of a public reception, restaurant/bar area (approximately 100 covers), a kitchen, public and private toilets, and a small basement for kitchen and storage.

On the lower ground floor there would be six en-suite bedrooms. The building would also include exhibition / educational facilities showing the history of the site.

Full details of the development form part of the planning application documentation.

The development will include 32 parking spaces in addition to 5 disabled parking spaces (total 37 spaces) formally marked out to accommodate the existing visitor car parking demand and the car parking associated with the development as before.

There will also be a service yard to accommodate the needs of service vehicles as a result of the commercial element of the site.

The parking area remains within the previously disturbed footprint, avoiding new impacts on undisturbed heritage or archaeological features. Adequate parking is essential to fully realise the public benefits of the project, such as the restaurant, visitor centre, and educational facilities, without compromising the heritage setting.

The extract on the next page shows the layout plan (by One 17 Architects and Interior Designers) and its relationship with Castle Hill Side to the south / east of the site.

Proposed Overall Site Plan Extract

Proposed Site Plan Extract

It is also proposed that a minimum of 10 secure cycle parking spaces be incorporated into the design once planning permission has been granted. The specific location, design and Type of the cycle storage facilities can secured through a planning condition.

The development can also make provision for electric charging points to future proof it with regard to offering convenient charging points for electric vehicles. Again, the exact number, location and infrastructure of the charging points can be secured through a planning condition.

Traffic Generation

The development is made up of a number of different uses, all of which are low traffic generators during the morning (8-9am) and evening peak hour (5-6pm).

It is considered the additional traffic will be spread throughout the day with slightly higher movements on a weekend.

Whilst this is not considered to be significant, there will be some increase in traffic in terms of visitors but also service vehicles.

The main traffic generators would be visitors to the hotel and restaurant but this would be spread during the day when the restaurant is in operation. The hotel facilities are limited to six en-suite bedrooms therefore; the traffic generation from this element of the development would be limited to no more than 4 movements in the morning peak and 5 movements in the evening peak hour.

The Café / Restaurant is approximately 199 sq. metres with a layout designed to accommodate a maximum of 100 covers.

Between 5 -6pm traffic flows are forecasted to be in the region 10 vehicles split 6 inbound and 4 outbound.

The busiest time is typically around 6-7pm with a peak traffic flow of 18 vehicles split 10 inbound and 8 outbound.

The traffic flows during the morning peak for the restaurant are considered to be insignificant.

Taking into account the two main traffic generators, a forecasted increase in traffic during the morning peak hour would be in the region of 4 additional movements. During the evening peak, an increase of approximately 15 vehicles would be forecasted.

The above does not take into account the trips generated by a visitor centre / exhibition faci lities. The proposed size of this element of the development is 78 sq. metres and is difficult to forecast what the likely traffic generation would be as result of this use.

Nevertheless, adding another 6 trips during the morning peak and a similar number during the evening peak would be a robust scenario.

As a result, the total traffic generation for the development would be in the region of 10 additional movements during the morning peak and 21 vehicle movements during the evening peak hour.

The forecasted increase in traffic is not considered to be significant.

Site Sustainability

The site benefits from a network of public footpaths surrounding the site and is considered to be accessible to pedestrians on foot.

The development will provide a minimum of 10 cycle parking spaces in a location to be agreed.

Bus stops are located on Ashes Lane some 200m metres from the site where bus service 341 runs from Huddersfield Town Centre to Stocksmoor.

The bus time table below shows the times and frequency for service number 341 which operates Monday to Friday.

Monday to Friday

Stocksmoor - Huddersfield

	342	341	341	341	341	341	341	341	341
Stocksmoor Rail Station ⇌		0640	0750	0931	1131	1406	1606	1806	2006
Thurstonland		0643	0753	0934	1134	1409	1609	1809	2009
Farnley Tyas		0650	0801	0942	1142	1417	1617	1817	2017
Almondbury	0625	0659	0811	0952	1152	1427	1627	1827	2027
Huddersfield Bus Station	0636	0710	0825	1005	1205	1440	1640	1840	2040

Code: ⇌ Adjoining or near Railway Station

Huddersfield - Stocksmoor

	341	341	341	341	341	341	341
Huddersfield Bus Station	0715	0855	1055	1330	1530	1730	1930
Almondbury	0726	0908	1108	1343	1543	1743	1943
Farnley Tyas	0736	0918	1118	1353	1553	1753	1953
Thurstonland	0743	0925	1125	1400	1600	1800	2000
Stocksmoor Rail Station ⇌	0747	0929	1129	1404	1604	1804	2004

Highway Improvements

The existing access road known as Castle Hill Side climbs up from its junction with Lumb Lane to the east of the monument. It is proposed to widen this road in three locations with more formal passing places that will be in the region of 4.5m – 4.8m wide. The passing places will be marked clearly identifying where they are located with adequate signing and lining.

The widenings will take place on the monument side of the access road (embankment) by clearing away approximately 1.0m of vegetation and laying a geo grid type construction that will allow a vehicle climbing up the road to use in order to give way to a vehicle heading down. The localised widenings will be will be sympathetic to the surroundings but serve as a durable passing place for all vehicles travelling up and down the access road.

Sanderson Associate Drawings in the Appendix shows the principle behind the passing places showing their location and construction of the proposals to accommodate the localised widenings required for the passing places.

The passing places allow drivers to approach each other having confidence to know they will pass each other safely at an appropriate speed.

The proposed widenings are a result of several months of negotiations / meetings with Kirklees Highways Development Management and discussions with Historic England in relation to minor alterations to the embankment.

The passing places are considered to form a meaningful improvement to the existing situation in terms of road safety.

Conclusions

The development is the replacement of the original Castle Hill Pub that was demolished in 2005.

The proposed development will consist of a public reception, restaurant/bar area, a kitchen, a visitor interpretation room, public and private toilets, small basement for storage.

On the lower ground floor there would be six en-suite bedrooms and the building will also include exhibition / educational facilities showing the history of the site.

The car park will be formalised incorporating 32 parking spaces in addition to 5 disabled parking spaces (total 37 spaces).

There will also be a service yard to accommodate the needs of service vehicles and staff.
A minimum of 10 secure cycle parking spaces will be provided as part of the final design.

Infrastructure to accommodate electric vehicle charging points will also be provided as part of the final design. This complements the requirements of Kirklees Council Local Plan PLP 22 and paragraph 39 of the National Planning Policy Framework (NPPF).

The traffic generated by the development is not considered to be significant during the morning or evening peak hour.

However, the access road known as Castle Hill Side will be improved with the introduction of three formalised passing places at convenient locations along its length with minimal interventions and a sympathetic highway improvement to the monument side (embankment) of Castle Hill as per Sanderson Associates Drawings

Notwithstanding the fact that there have been no accidents recorded in the last 5 years on Castle Hill Side, the proposed passing places are considered to be an improvement to the existing situation in terms of reducing any reversing and easing the flow of traffic in both directions. The passing places are considered to have a beneficial impact in terms of improving road safety.

It is considered the development can accommodate sustainable modes of transport and be accessed safely by all road users which is in line with Kirklees Council Local Plan PLP 21 and Paragraph 14 of the NPPF.

The limited improvements to Castle Hill Side are considered to be in keeping with the Heritage aspects of the site, respecting the requirements from Historic England in terms of minimising the impact of the development from a highways aspect.

Based on the proposed highways improvements, it is considered the development does not cause any negative impacts in terms of road safety or congestion and is therefore acceptable in planning terms.

Appendix 1 – Sanderson Associates Drawing No 156199-100-001

General Arrangement and Site Clearance

- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
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- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.

- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

General Arrangement

Site Clearance

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Client	Project Title	Drawing Title
CASTLE HILL HOTEL HERITAGE LTD	CASTLE HILL, HUDDERSFIELD	GENERAL ARRNAGEMENT AND SITE CLEARANCE

Rev	Amendment	Drawn	Date	Checked

Scale 1:250	Drawn By TOD
Drawing Size A1	Checked By MB
Date September-23	Approved By MB
	Drawing Number 156199-100-001 / Rev

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Appendix 2 – Sanderson Associates Drawing No 156199-100-002

Contours and Sections Sheet 1 of 3

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Key

Proposed Edge of Passing Place

Proposed Retaining Structure

Levels Table

Number	Minimum Level	Maximum Level	Color
1	-1.084	-1.000	
2	-1.000	-0.900	
3	-0.900	-0.800	
4	-0.800	-0.700	
5	-0.700	-0.600	
6	-0.600	-0.500	
7	-0.500	-0.400	
8	-0.400	-0.300	
9	-0.300	-0.200	
10	-0.200	-0.100	
11	-0.100	0.000	
12	0.000	0.096	

Section Passing Place 1 - Retaining Wall - Passing Place 1 - Retaining Wall
(Vertical Exaggeration x1.00)

Distance (m)	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00
Existing Levels	26.62	27.21	27.47	27.72	27.93	27.99	28.11	28.22	28.13	27.89
Proposed Levels	26.12	26.31	26.50	26.70	26.89	27.04	27.19	27.34	27.46	27.57

Key

300mm Flag on Edge

450mm Retaining

600mm Retaining

750mm Retaining

900mm Retaining

1050mm Retaining

1200mm Retaining

Section 5.000 (11) - 5.000 (11)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.50
Existing Levels	33.43	30.20	27.38	26.98
Proposed Levels	32.70	29.46	26.42	26.22

Section 10.000 (12) - 10.000 (12)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.50
Existing Levels	33.95	30.74	27.53	27.53
Proposed Levels	33.39	29.94	26.90	26.70

Section 15.000 (13) - 15.000 (13)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.50
Existing Levels	33.85	30.83	28.17	27.81
Proposed Levels	33.58	30.31	27.27	27.08

Section 20.000 (14) - 20.000 (14)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.50
Existing Levels	33.43	30.46	27.84	27.49
Proposed Levels	32.91	30.16	27.58	27.39

Rev	Amendment	Drawn	Date	Checked

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Client

CASTLE HILL HOTEL HERITAGE LTD

Project Title

CASTLE HILL, HUDDERSFIELD

Drawing Title

Contours and Sections
(Sheet 1 of 3)

Scale	Drawn By
1:250	TOD
Drawing Size	**Checked By**
A1	MB
Date	**Approved By**
September-23	MB

Drawing Number	Rev
156199-100-002	

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Appendix 3 – Sanderson Associates Drawing No 156199-100-003

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Key

Proposed Edge of Passing Place

Proposed Retaining Structure

Levels Table

Number	Minimum Level	Maximum Level	Color
1	-1.084	-1.000	
2	-1.000	-0.900	
3	-0.900	-0.800	
4	-0.800	-0.700	
5	-0.700	-0.600	
6	-0.600	-0.500	
7	-0.500	-0.400	
8	-0.400	-0.300	
9	-0.300	-0.200	
10	-0.200	-0.100	
11	-0.100	0.000	
12	0.000	0.096	

Longsection Passing Place 2 - Retaining Wall
(Vertical Exaggeration x1.00)

Distance (m)	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00
Existing Levels	31.25	31.58	31.76	31.93	32.11	32.29	32.47	32.65	32.83	33.01	33.19	33.37	33.30
Proposed Levels	30.70	30.85	31.03	31.21	31.39	31.57	31.76	31.94	32.12	32.30	32.48	32.66	32.89

Key

300mm Flag on Edge

450mm Retaining

600mm Retaining

750mm Retaining

Section 5.000 (15) - 5.000 (15)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.60	0.00
Existing Levels	37.29	34.30	31.68	31.33
Proposed Levels	36.97	33.78	30.95	30.75

Section 10.000 (16) - 10.000 (16)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.60	0.00
Existing Levels	37.73	34.75	32.13	31.77
Proposed Levels	37.43	34.23	31.41	31.21

Section 15.000 (17) - 15.000 (17)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.60	0.00
Existing Levels	38.16	35.20	32.57	32.22
Proposed Levels	37.88	34.68	31.86	31.66

Section 20.000 (18) - 20.000 (18)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.60	0.00
Existing Levels	38.64	35.65	33.07	32.67
Proposed Levels	38.38	35.13	32.31	32.12

Section 25.000 (19) - 25.000 (19)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.60	0.00
Existing Levels	38.99	36.00	33.35	33.00
Proposed Levels	38.79	35.52	32.80	32.60

Rev	Amendment	Drawn	Date	Checked

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Client
CASTLE HILL HOTEL HERITAGE LTD

Project Title
CASTLE HILL, HUDDERSFIELD

Drawing Title
Contours and Sections
(Sheet 2 of 3)

Scale	Drawn By
1:250	TOD
Drawing Size: A1	Checked By: MB
Date: September-23	Approved By: MB

Drawing Number: 156199-100-003
Rev:

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Appendix 4 – Sanderson Associates Drawing No 156199-100-004

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Key

Proposed Edge of Passing Place

Proposed Retaining Structure

Levels Table

Number	Minimum Level	Maximum Level	Color
1	-1.084	-1.000	
2	-1.000	-0.900	
3	-0.900	-0.800	
4	-0.800	-0.700	
5	-0.700	-0.600	
6	-0.600	-0.500	
7	-0.500	-0.400	
8	-0.400	-0.300	
9	-0.300	-0.200	
10	-0.200	-0.100	
11	-0.100	0.000	
12	0.000	0.096	

Longsection Passing Place 3 - Retaining Wall
(Vertical Exaggeration x1.00)

Distance (m)	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
Existing Levels	35.86	36.02	36.38	36.73	37.08	37.43	37.78	38.07
Proposed Levels	35.37	35.74	36.11	36.49	36.86	37.23	37.60	37.97

Key

150mm Flag on Edge

300mm Flag on Edge

450mm Retaining

600mm Retaining

Section 5.000 (20) - 5.000 (20)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.60
Existing Levels	40.50	38.38	35.95	38.24
Proposed Levels	40.50	38.26	35.75	35.57

Section 10.000 (21) - 10.000 (21)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.60
Existing Levels	40.67	39.21	36.83	37.11
Proposed Levels	40.67	39.19	36.69	36.89

Section 15.000 (22) - 15.000 (22)
(Vertical Exaggeration x1.00)

Distance (m)	-10.00	-5.00	0.00	0.60
Existing Levels	41.41	39.84	37.69	37.94
Proposed Levels	41.41	39.84	37.63	37.82

Rev	Amendment	Drawn	Date	Checked

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Client
CASTLE HILL HOTEL HERITAGE LTD

Project Title
CASTLE HILL, HUDDERSFIELD

Drawing Title
Contours and Sections
(Sheet 3 of 3)

Scale	Drawn By
1:250	TOD
Drawing Size	**Checked By**
A1	MB
Date	**Approved By**
September-23	MB

Drawing Number	Rev
156199-100-004	

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Appendix 5 – Sanderson Associates Drawing No 156199-100-005

Dedication Plan

- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.

- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or it's vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or it's appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.

- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

Key

- Proposed Adoptable Byway
- Proposed Adoptable Verge
- Existing limit of Adoption
- Extent of proposed widening

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Client	Project Title	Drawing Title
CASTLE HILL HOTEL HERITAGE LTD	CASTLE HILL, HUDDERSFIELD	DEDICATION PLAN

Rev	Amendment	Drawn	Date	Checked

Scale 1:250	Drawn By TOD
Drawing Size A1	Checked By MB
Date September 2023	Approved By MB
	Drawing Number 156199-100-005 / Rev

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Appendix 6 – Sanderson Associates Drawing No 156199-700-001

Pavement and Kerbing

- Sanderson Associates Consulting Engineers ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plan(s) and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
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- Service connections are not shown but their presence should be anticipated.

- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.

Key

Proposed Verge

450mm Topsoil/Seed

Full Carriageway Construction

30mm Surface Course - AC6 Dense SURF 100/150
55mm Binder Course - AC20 Dense BASE 100/150
85mm Base Course - AC32 Dense BASE 100/150
Type Sub-Base*
Capping*

*Sub-base and capping depth based off CBR Table Below

Carriageway Tie-in Details

0 - 1m	30mm Surface Course - AC6 Dense SURF 100/150 55mm Binder Course - AC20 Dense BASE 100/150 85mm Base Course - AC32 Dense BASE 100/150
1m - 1.5m	30mm Surface Course - AC6 Dense SURF 100/150 55mm Binder Course - AC20 Dense BASE 100/150
1.5 - Extent of Carriageway	30mm Surface Course - AC6 Dense SURF 100/150

CBR Table - As per Kirklees Drawing Ref: HD-SD-07-12A

CBR %	SUB BASE ONLY (mm)	SUB Base (mm)	Capping (mm)
<2.5	Ground remediation required to improve sub grade CBR		
2.5-3.0	450	350	250
3.0-4.0	420	320	240
4.0-5.0	370	280*	230
5.0-15.0	330	280*	210
>15.0	280*	280*	150

Minimum required type 1 sub base depth to achieve 450mm of non-frost susceptible material

Kerbing Details

125x255 HB2 PCC Kerb - 125mm Upstand

CASTLE HILL LANE
CARRIAGEWAY TIE-IN DETAIL
Scale 1:20

HALF BATTERED KERB
Scale 1:20

ROAD LAYER	ALTERNATIVE MATERIAL	SHARED SURFACE/ HOME ZONE		LOCAL RESIDENTIAL STREET	CONNECTOR STREET	INDUSTRIAL ROAD
SURFACE COURSE	14mm stone mastic asphalt surface course SMA 14 surf 40/60				40	40
	0/6mm dense surface course AC.6 dense surf 100/150	30		30		
	Concrete block paving on 30mm sand bed red brindle or similar approved. (Tegula / Yorkstone in conservation area)		80 BLOCK ON 30 SAND	N/A	N/A	N/A
BINDER COURSE	0/20 dense binder course AC.20 dense bin 100/150	55		50	55	55
BASE COURSE	0/32 dense / binder course AC.32 dense base / bin 100/50	85		85	85	150

PAVEMENT DESIGN

Table A-30: Pavement Foundation Design

	INCLUDING CAPPING LAYER			EXCLUDING CAPPING LAYER
CBR %	CAPPING(mm) +	SUB BASE(mm)		SUB BASE(mm)
Less than 2.5	Ground remediation will need to be considered to improve the subgrade CBR			-
2.5	250	350	OR	450
3	240	320		420
4	230	280*		370
5-15	210	280*		330
Greater than 15	150	280*		280*

*Minimum required type 1 sub base depth to achieve 450mm of non-frost susceptible material

Capping and Sub base construction will conform with Leeds Transport Supplementary Planning Document for Pavement Foundation Design March 2022.

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Client	Project Title	Drawing Title
CASTLE HILL HOTEL HERITAGE LTD	CASTLE HILL, HUDDERSFIELD	PAVEMENT KERBING

Rev	Amendment	Drawn	Date	Checked

Scale: AS SHOWN	Drawn By: TOD
Drawing Size: A1	Checked By: MB
Date: September 2023	Approved By: MB
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