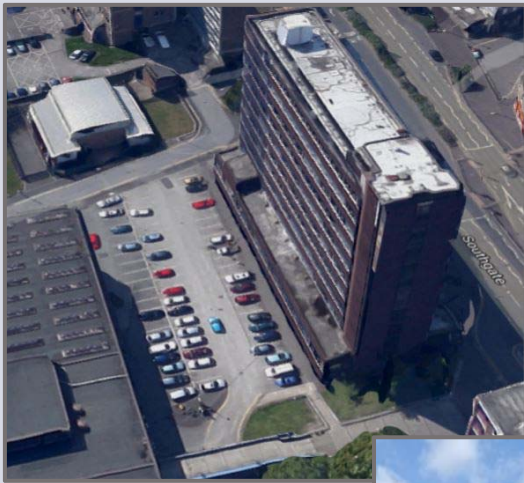


Banners Gate

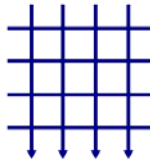
Highways & Transportation

Change of use from offices to residential at
Crown House, Southgate
Huddersfield

Transport Statement
(December 2017)



The transport implications of a change
of use to provide 113 apartments



BANNERS GATE
HIGHWAYS AND TRANSPORTATION

Change of use from offices to residential
at Crown House, Southgate
Huddersfield
Transport Statement

Banners Gate Transportation Ltd has prepared this report in the course of an assignment for **Nick Sellman Property Investments** the conditions of which were set out in its appointment for consulting engineering services by the Client. Banners Gate Transportation Ltd shall not be responsible for the use of the report or its contents for any purposes other than those for which it was prepared and provided.

Job P1254	Revision	Prepared and checked by	Date
	First issue, 98 units	Nigel Vening BSc CEng MICE MCIHT	18 September 2017
	Updated layout, 113 units	Nigel Vening BSc CEng MICE MCIHT	21 December 2017

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RESIDENTIAL DEVELOPMENT AT CROWN HOUSE

TRANSPORT STATEMENT

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APPENDICES

Appendix A	Lower Ground floor plan (parking)
Appendix B	Typical proposed floor plan (3 rd to 8 th floor)
Appendix C	TRICS database, town centre - <i>Employment / Offices</i>
Appendix D	TRICS database, town centre - <i>Residential / Flats Privately Owned</i>
Appendix E	Details of car (or van) availability, Kirklees 029D, 034B and 039C

References:

The National Census 2011
National Planning Policy Framework (March 2012)
The Department for Communities and Local Government, Permitted Development Rights
TRICS database (version 7.4.2)
Kirklees Unitary Development Plan

TRANSPORT STATEMENT

1 INTRODUCTION

- 1.1 Banners Gate Transportation Limited has been instructed by Nick Sellman Property Investments Ltd to study transport and highway engineering issues in support of a planning application for redevelopment of Crown House, Southgate, Huddersfield.



It is proposed to convert the 10-storey office building to apartments.

In 2013 the directives for Permitted Development Rights was extended to include a change of use from offices to residential and remains in force until May 2019. The building has been actively marketed for continued usage as offices but without success. Therefore, the owner has decided that the best outcome for the building involves a change of use to residential apartments in line with Permitted Development Rights.

- 1.2 A *Transport Statement* was prepared by Banners Gate Transportation Ltd in September 2017 to provide information on highway and transportation topics related to Prior Notification for a change of use to 98 apartments. Since that time the proposals have been amended with modifications to the building to promote a development of 113 apartments. Therefore, this report has been updated to reflect the revised proposals and discusses relevant transport planning topics including:

- The precedent of traffic generation to the existing offices
- Details of traffic generation to the proposed apartments
- Typical car ownership and expected parking demand for the apartments
- Parking options on site for cars and bicycles
- Refuse collection
- Sustainability credentials of the site

- 1.4 The existing site and road network is described in Section 2 whilst the development proposals are described in Section 3. The transport planning implications of the residential development are discussed in Section 4.

2 EXISTING CONDITIONS

2.1 Existing building and access The 10-storey office of Crown House is located on the eastern side of Huddersfield town centre. The building has frontage access onto the route of Southgate which forms part of the A62 Ring Road to the town. The Ring Road includes a service road adjacent to Crown House. This section of highway was primarily used as a drop-off and pick up area for pedestrians using the walkway that connected Southgate with the sports centre. Vehicular access to the site is obtained from the route of Old Leeds Road which connects onto the route of the A62 Leeds Road by means of a priority junction that includes a right turning lane. Parking areas are provided in the basement and external areas on the southern side of the building.



Accommodation Floor	sqm	sqft
Ground	858.4	9,240
First	512.9	5,521
Second	512.9	5,521
Third	512.9	5,521
Fourth	512.9	5,521
Fifth	512.9	5,521
Sixth	512.9	5,521
Seventh	512.9	5,521
Eighth	512.9	5,521
Ninth	512.9	5,521
Total Floor Area	5,474.5	58,929

2.2 Road network Crown House is located adjacent to the A62 dual carriageway ring road to Huddersfield. At this point the ring road includes three lanes southbound and two lanes northbound flaring to three lanes at the signal controlled junction with St Peter's Street. This junction, close to the service road adjacent to the site, operates with two phases where one-way traffic on St Peter's Street has the option to turn to either direction on the ring road. Local roads have a 30mph speed limit with street lighting. Footways are provided and a staggered controlled (pelican) crossing is located on the ring road opposite Crown House.

2.3 The area has changed significantly in the last 18 months after demolition of the former sports centre and tower blocks that were located on land to the north and east of Crown House. Redevelopment is expected to include an emphasis on residential development with access via the single carriageway route of Old Leeds Road. The single carriageway route also provides access to other neighbouring areas including use of a narrow canal bridge.

2.4 Accessibility to local services and public transport Typically a 10-minute walk or 800 metres represents a good starting point to define whether or not a site has adequate access to local facilities. There is no doubt that this town centre office has excellent sustainability credentials. A short walk of 500 - 600 metres provides access to the heart of the town centre including Kingsgate Shopping Centre. The central bus station and railway station are both located with 800 metres. The site is a sustainable location for residential development.

3.1 The existing office building of Crown House would be converted to 113 apartments. The proposals would involve significant alterations to the interior of the building. The primary *pedestrian* access would be obtained from the existing entrance that connects onto Southgate. A *vehicular* access would be provided from Old Leeds Road. The proposals are summarised as follows:

3.2 The details of the proposed parking area in the lower ground floor are illustrated at [Appendix A](#). A typical floor plan (3rd to 8th floor) is illustrated at [Appendix B](#). For details refer to drawings prepared by Dawson Williamson Architects. The development prompts questions related to traffic generation and parking. A commentary on these transport planning topics is included in Section 4.

4 THE TRANSPORT PLANNING IMPLICATIONS OF THE DEVELOPMENT

4.1 Traffic generation for the offices

4.1.1 The traffic generation characteristics of the office building can be compared to apartments to obtain an understanding of the proposed development. The office building has an estimated gross internal floor area of 5,475 square metres. An office building can generate significant traffic flows primarily between 8am and 9am and also 4pm and 6pm. The office is vacant and therefore it is not possible to measure traffic flows or ask employees about their travel arrangements. Therefore, a guide to traffic generation can best be obtained by referring to the TRICS database. The sample below uses data in England only (excluding Greater London) from “town centre” sites only. The expected trip generation of offices at Crown House is summarised below and included in full at [Appendix C](#).

Offices	AM (0800 to 0900)		PM (1700 to 1800)		7am to 7pm
5,475sqm, (gross internal)	Arrivals	Departures	Arrivals	Departures	Two-way
Trip rate (per 100sqm)	0.581	0.072	0.046	0.560	5.079
Offices of 5,475 sqm	32	4	3	31	278

Table 1

4.1.2 The figures suggest that traffic generation in a peak hour would be of the order of 35 trips (two-way). The site includes parking for an estimated 33 cars but it understood some staff used the adjacent car park for the sports centre. Therefore, the overwhelming majority of parking demand can be accommodated on site. The office would generate approximately 278 trips (two-way) over the working day from 7am to 7pm.

4.2 Traffic generation for the apartments

4.2.1 Traffic flows to the residential development can also be predicted using the TRICS database. Trip rates can vary depending on the type of property or provision of local shops, schools and public transport. The sample from the database seeks to use similar parameters to the data for the existing offices in Table 1. The sample uses a selection of “flats privately owned” in “town centre” locations only to obtain a reasonably representative sample. Details of the trip rates are provided at [Appendix D](#). Typical trip rates for the apartments are summarised below.

	AM (0800 to 0900)		PM (1700 to 1800)		7am to 7pm
Flats privately owned	Arrivals	Departures	Arrivals	Departures	Two-way
Trip Rate (per property)	0.019	0.047	0.051	0.037	0.683
Trips to 113 apartments	2	5	6	4	77

Table 2

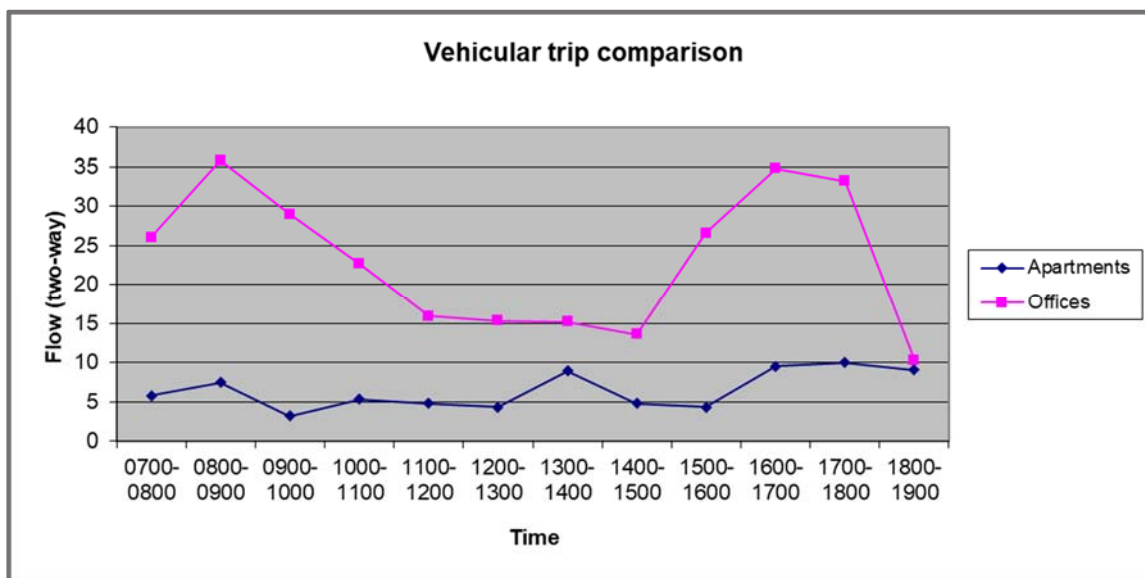
4.2.2 The figures suggest that peak hour traffic generation would be approximately 10 trips two-way.

4.3 A comparison of traffic movements

4.3.1 A typical town centre offers a vast amount of employment, leisure and retail opportunities for local residents. Therefore, the need to rely on the use of a private car is substantially reduced. For these reasons, town centre living clearly is attractive to those people who do not own a private car.

4.3.2 Conversely, an office development in the town centre creates traffic from many areas. The town centre offers sustainable travel but equally trips using the private car are generated by surrounding areas where travel choices may be limited. Therefore, the development including a change of use to apartments would reduce the amount of traffic at Crown House. The comparison is illustrated graphically below.

Weekday comparison of 5,475 square metres of offices v 113 new apartments



4.3.3 Traffic generation figures may vary but it is clear the office would generate notably higher traffic flows within the conventional peak hours and throughout the day. It is clear that traffic generation would reduce in the event of a change of use to residential.

4.3.4 The Department for Communities and Local Government is aware of the general reduction in traffic brought about by a change of use from office to residential and this has been one factor why this option has been added to the inventory of Permitted Development. The TRICS database provides evidence that the change of use to apartments at Crown House would create benefits by a reduction in peak hour traffic flows at this location. It is expected that a reduction in traffic flows within this town centre environment would be welcomed by both the Highway Authority and Planning Department.

4.4 Car ownership in Huddersfield and parking provision

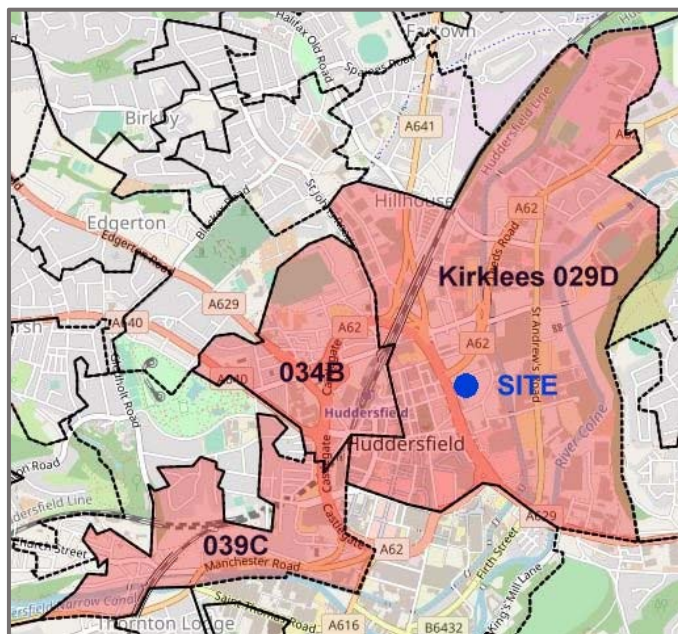
- 4.4.1 Kirklees Council is currently preparing the Local Plan to update and replace the Unitary Development Plan. Various policies have been saved prior to the adoption of the Local Plan including Policy T19 that refers to off-street parking standards. This Policy refers to Appendix 2 and parking standards for various land-uses. An extract of this parking standard applicable for apartments is provided below.

USE CLASS C3: RESIDENTIAL	
1 Resident parking	spaces per unit:
Flats	
Bedsits	0.5
1 bedroom	1
2 bedroom or > 70 sq. m.	1.5

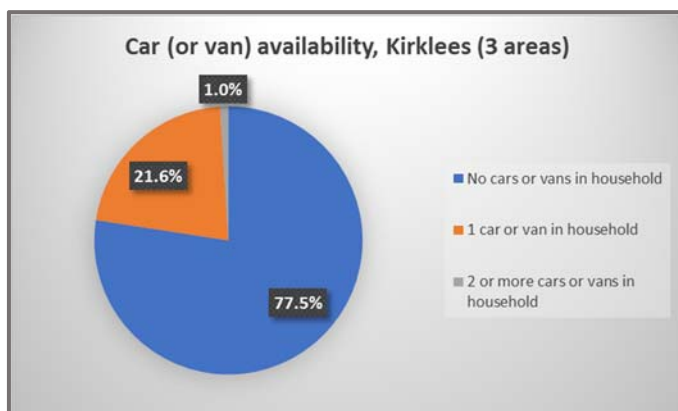
- 4.4.2 The parking guidance recommends a provision of 1 space per apartment. The development is aimed at younger residents that would actively seek to live in a town centre location where numerous services are available and therefore there is very limited need for a private car. Car ownership can depend, as stated above, on the size of the dwellings as well as type of tenancy and location. In this instance, the development consists of smaller apartments (<70 sqm) only in a very sustainable location. The site is located a short walking distance from Huddersfield town centre and therefore a reduction on the parking ratios is possible at this location.
- 4.4.3 Paragraph 39 of National Planning Policy Framework invites a number of factors to be taken into account when considering parking provision as listed below.

39. 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; and ● an overall need to reduce the use of high-emission vehicles.

- 4.4.4 It is known that the car ownership of residents in relatively small apartments in a town centre would be lower than car ownership of residents in large family houses in suburban areas. The wording of the paragraph invites research on local car ownership levels.
- 4.4.5 An understanding of a suitable level of parking for the proposed development can be obtained from the National Census 2011 statistics of car (or van) availability. This work is outlined below.



Information has been obtained for three Super Output Area Lower Layers, labelled as Kirklees 029D, 034B and 039C which cover the town centre area and Crown House. It is possible to obtain details of car ownership, selected by the types of dwellings, for a chosen lower layer. It is expected that the apartments would appeal to single residents over the age of 17 years. Therefore, data on car (or van) availability of residents in apartments can be obtained for these selected areas of Huddersfield town centre. This information is illustrated graphically opposite.



The information reveals that residents of 729 out of 941 apartments (77.5%) in this part of Huddersfield do not own a car. A total of 203 residents (21.6%) own one car and the balance of approximately 1% own 2 cars or more. Details are included at [Appendix E](#).

4.4.6 It is possible to calculate a weighted average of the expected number of cars owned by residents of 113 new apartments in this part Huddersfield.

Ownership & factor		Kirklees layers 029D, 034B, 039C	113 properties
No cars	0	77%	0 vehicles
1 car	1	22%	24 vehicles
2 cars	2.3	1%	3 vehicles
			27 vehicles

4.4.7 The total parking that would be provided as part of the Permitted Development project at Crown House is 25 spaces. Therefore, the proposed parking provision approximately equates with known car ownership of residents in the local area. Town centre living is attractive to those residents who do not own a car and therefore the parking provision is considered appropriate for a development of apartments at this location.

- 4.4.8 The lower ground floor to Crown House included tandem parking for staff at the offices. This accounts for an additional 8 spaces in the lower ground floor when compared to the residential scheme. Tandem parking is not practical for shared residential usage and therefore this area can be used for cycle storage. Cycling would be popular since vast areas of the wider Huddersfield area are located within a reasonable cycling distance. The storage areas would be secure and readily accessible for residents.

4.5 Waste and recycling collection

- 4.5.1 Paragraph 6.8.9 of Manual for Streets states:

“residents should not be required to carry waste more than 30 metres (excluding any vertical distance) to the storage point; • waste collection vehicles should be able to get to within 25 metres of the storage point”

- 4.5.2 Refuse collection at the offices involved the use of trolley bins placed within the lower ground floor of the building. The creation of residential development will involve the need for additional refuse and recycling collections which would also be stored in the lower ground floor of the building. Refuse wagons can gain access to the building via the route of Old Leeds Road. The termination of the Old Leeds Road includes a turning area which allows a refuse wagon to turn and then reverse into the vehicular access to the site. The refuse storage areas are readily accessible within the southern areas of the lower ground floor to the building. Therefore, the proposals for refuse collection is considered to be acceptable and adheres to the guidelines as described above.



4.6 Summary with reference to NPPF

4.6.1 Planning policy is determined by National Planning Policy Framework (NPPF) and Local Plan Policy. The government recognises that the planning process is instrumental in creating jobs and growth in the economy. The new guidance provides a presumption in favour of sustainable development and projects should adhere to local plan policy. Paragraph 37 of National Planning Policy Guidance refers to policies whereby *“people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities”*.

4.6.2 There is no doubt that a residential project on the edge of the ring road to Huddersfield has a highly sustainable location with easy access to all the facilities of the town centre, including bus and rail travel and therefore provides an excellent example of sustainable development.

4.6.3 A walking distance of 600-700 metres provides access to the town centre including the Kingsgate shopping centre and a wide selection of shops and services. A staggered controlled crossing of the ring road is located adjacent to Crown House. A short walk (<350 metres) provides access to Sainsbury supermarket without the need to cross a major road.



4.6.4 Paragraph 32 also states that *“Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe”*. The evidence contained in this report demonstrates that a residential development at Crown House, Southgate, is entirely plausible, highly sustainable with less weekday and peak hour traffic generation than previous uses as an office and therefore the residual cumulative impacts cannot be described as severe. Therefore, planning permission should be granted.

5 CONCLUSIONS

5.1 Banners Gate Transportation Ltd has been instructed to consider the transport planning implications of redevelopment of the office building of Crown House on Southgate in Huddersfield. Key highway planning issues are summarised below.

- The existing offices would be converted to provide 113 apartments. The lower ground floor would be reconfigured to include parking spaces and areas for the storage of bicycles and refuse.
- The project replaces the potential traffic generation expected at Crown House offices with vehicular movements created by 113 apartments. By using the TRICS database, it is possible to ascertain that the development of apartments significantly reduces traffic flows to the site both during the peak hours and throughout the day.
- The offices benefit from parking areas for an estimated total of 33 cars which would be amended to provide 25 residential spaces. It is possible to learn details of the car (or van) availability of residents of apartments in the local area (defined as Kirklees 029D, 034B and 039C) in the National Census. It is known that 77% of single residents (over the age of 17 years) of apartments in the town centre do not own a car. The weighted average number of cars owned by residents of 113 apartments is expected to be 27 vehicles. The parking provision of 25 cars equates approximately to expected car ownership and therefore is considered appropriate for this highly sustainable town centre location.
- Crown House is a short walk of approximately 500 metres from Huddersfield town centre including offices, shops, bus and rail services and the Kingsgate shopping centre. A controlled crossing of Southgate provides convenient access to the town centre. There is no doubt that this town centre site has excellent sustainability credentials.
- The refuse and recycling would be stored in the southern area of the lower ground floor of the building. The collection point is readily accessible for residents and operatives and conforms to the guidelines provided in Manual for Streets.
- The project cannot be construed to have a severe impact (wording of NPPF) but alternatively the site is an excellent example of sustainable development.

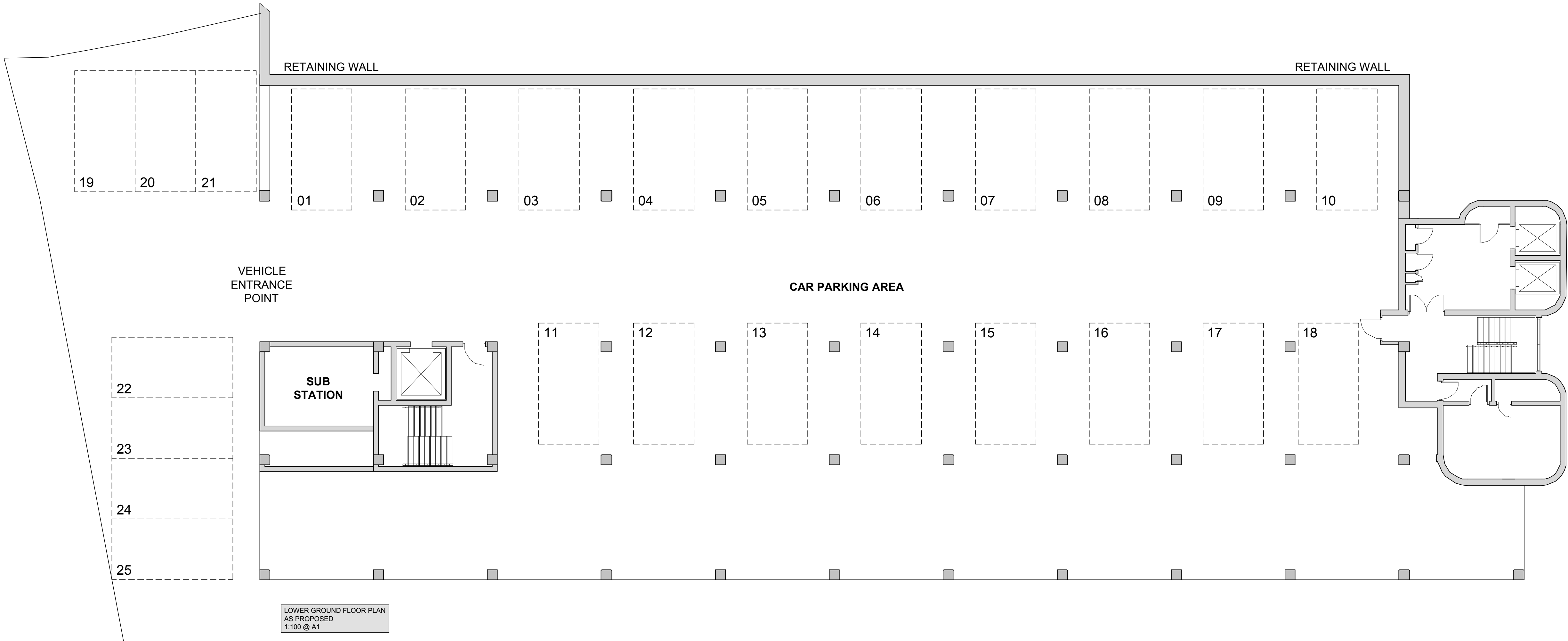
5.2 It is our view that traffic from the project would not adversely affect the operation of the highway network and there are no sustainable highway reasons why planning permission should be withheld for the development at Crown House, Southgate, Huddersfield.

Banners Gate Transportation Ltd, December 2017

Appendix A

Lower Ground floor plan (parking)

IMPORTANT NOTE:
NO EXTERNAL WORKS ARE PROPOSED IN CONNECTION
WITH THIS STAGE OF THE PROPOSAL (PD)



GENERAL NOTES:

WRITTEN DIMENSIONS TO TAKE PRECEDENT OVER SCALED DIMENSIONS.

MAIN CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE PRIOR TO COMMENCING CONSTRUCTION OR MANUFACTURE TO ENSURE ACCURACY.

DRAWING STATUS:

- ☐ PRELIMINARY ISSUE
- ☒ PLANNING ISSUE
- ☐ BUILDING REGULATIONS
- ☐ PRE-CONSTRUCTION
- ☐ TENDER ISSUE
- ☐ CONSTRUCTION ISSUE
- ☐ RECORD ISSUE

NOTE: ONLY 'CONSTRUCTION ISSUE' DRAWINGS ARE TO BE USED ON SITE

DRAWING REVISIONS:

- REV 01 11.09.17
PD (PRIOR NOTIFICATION) SUBMISSION
- REV 02 31.10.17
INTERNAL LAYOUTS REVISED TO SUIT CLIENT COMMENTS.
PD (PRIOR NOTIFICATION) SUBMISSION

PROJECT TITLE: CROWN HOUSE,
SOUTHGATE,
HUDDERSFIELD
HD1 6QN

CLIENT: UVEE

DRAWING TITLE: LOWER GROUND FLOOR PLAN
AS PROPOSED

SCALE: 1:100 @ A1

DRAWING NO: R1056-039 R2

DAWSON WILLIAMSON
ARCHITECTS

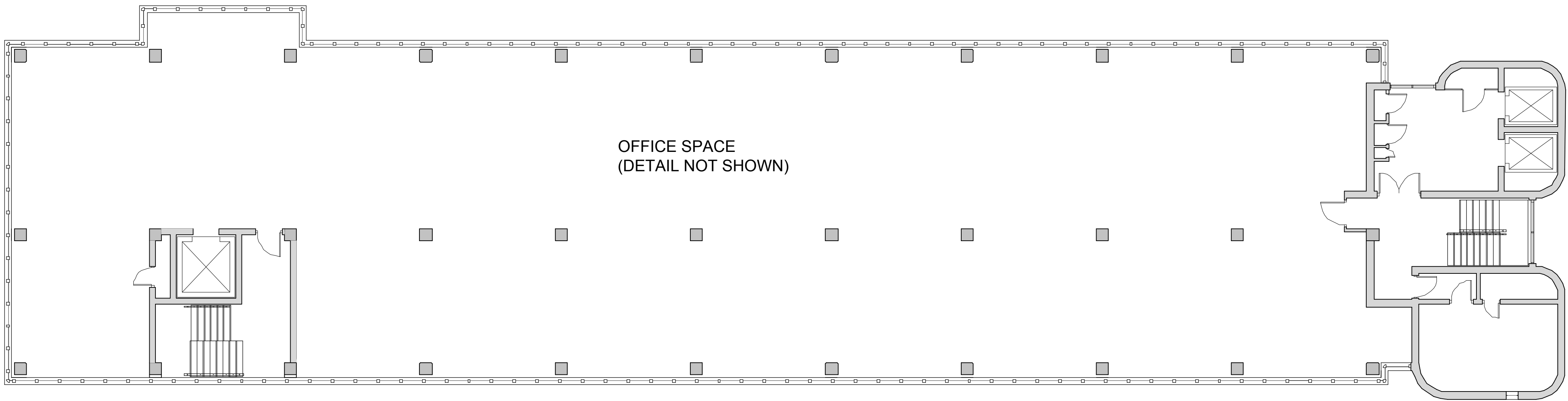
Hope Park Business Centre Bradford, BD5 8HB
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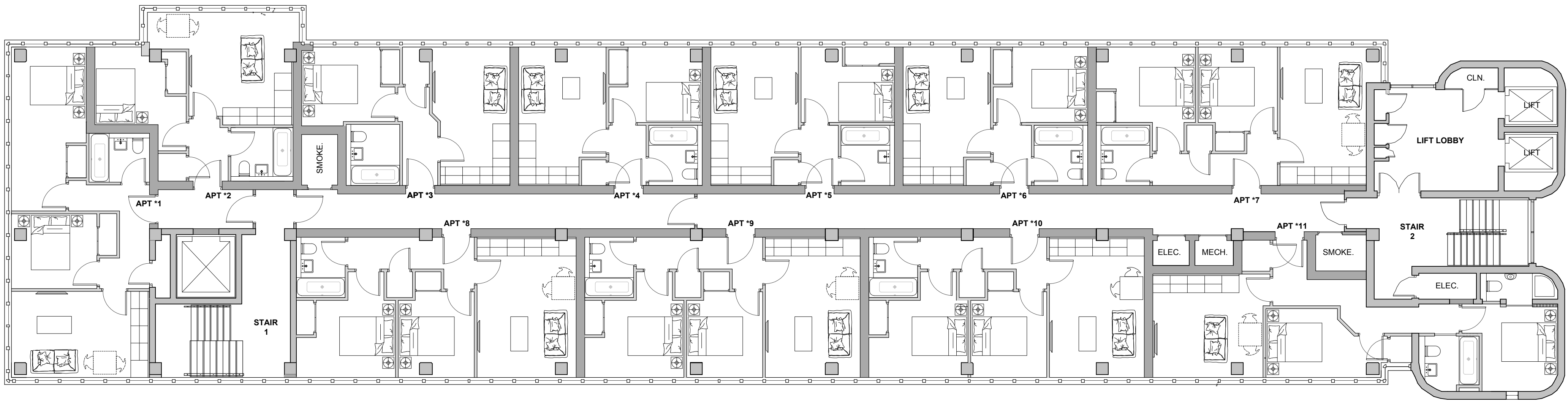


Appendix B

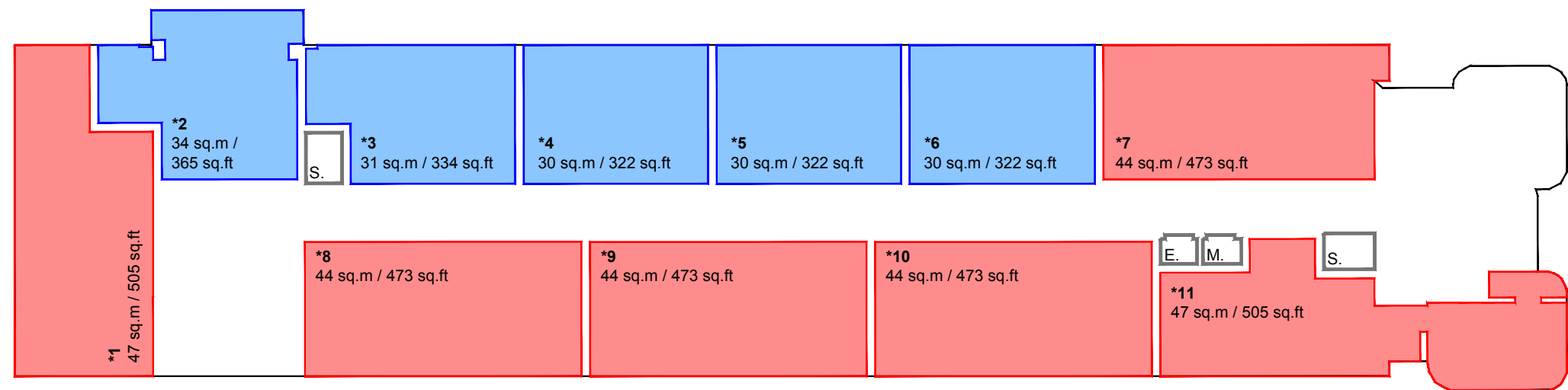
Typical proposed floor plan (3rd to 8th floor)



THIRD-EIGHTH FLOOR PLAN
AS EXISTING
1:100 @ A1



THIRD-EIGHTH FLOOR PLAN
AS PROPOSED
1:100 @ A1



GENERAL NOTES:

WRITTEN DIMENSIONS TO TAKE PRECEDENT OVER SCALED DIMENSIONS.

MAIN CONTRACTOR TO CONFIRM ALL DIMENSIONS ON SITE PRIOR TO COMMENCING CONSTRUCTION OR MANUFACTURE TO ENSURE ACCURACY.

DRAWING STATUS:

- ☐ PRELIMINARY ISSUE
☒ PLANNING ISSUE
☐ BUILDING REGULATIONS
- ☐ PRE-CONSTRUCTION
☐ TENDER ISSUE
☐ CONSTRUCTION ISSUE
☐ RECORD ISSUE
- NOTE: ONLY 'CONSTRUCTION ISSUE' DRAWINGS ARE TO BE USED ON SITE

DRAWING REVISIONS:

- | | |
|--------|---|
| REV 01 | 11.09.17
PD (PRIOR NOTIFICATION) SUBMISSION |
| REV 02 | 31.10.17
INTERNAL LAYOUTS REVISED TO SUIT CLIENT COMMENTS.
PD (PRIOR NOTIFICATION) SUBMISSION |

PROJECT TITLE: CROWN HOUSE,
SOUTHGATE,
HUDDERSFIELD
HD1 6QN

CLIENT: UVEE

DRAWING TITLE: THIRD - EIGHTH FLOOR PLANS
AS PROPOSED

SCALE: 1:100/200 @ A1

DRAWING NO: R1056-042 R2

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Appendix C

Extract from the TRICS database (version 7.4.2)

Town centre only, - *Employment / Offices*

Calculation Reference: AUDIT-429201-170801-0804

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	SO SLOUGH	1 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	2 days
09	NORTH	
	TV TEES VALLEY	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 960 to 40000 (units: sqm)
 Range Selected by User: 186 to 70291 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 26/09/16

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	2 days
Wednesday	2 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Town Centre	8
-------------	---

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	1
Built-Up Zone	6
High Street	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

B1

8 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000

1 days

15,001 to 20,000

2 days

25,001 to 50,000

4 days

50,001 to 100,000

1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

125,001 to 250,000

3 days

250,001 to 500,000

3 days

500,001 or More

2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0

4 days

1.1 to 1.5

3 days

1.6 to 2.0

1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes

3 days

No

5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present

8 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BR-02-A-02 ST THOMAS STREET	PLANNING & ENGINEERING	BRISTOL CITY
	BRISTOL Town Centre Built-Up Zone		
	Total Gross floor area:	5736 sqm	
	Survey date: FRIDAY	29/11/13	Survey Type: MANUAL
2	CA-02-A-05 NEW ROAD	OFFICES	CAMBRIDGESHIRE
	PETERBOROUGH Town Centre Built-Up Zone		
	Total Gross floor area:	8793 sqm	
	Survey date: TUESDAY	16/12/14	Survey Type: MANUAL
3	EX-02-A-03 VICTORIA AVENUE	HMRC	ESSEX
	SOUTHEND-ON-SEA Town Centre Built-Up Zone		
	Total Gross floor area:	45000 sqm	
	Survey date: WEDNESDAY	23/10/13	Survey Type: MANUAL
4	GM-02-A-07 MOSELEY STREET	LAW OFFICES	GREATER MANCHESTER
	MANCHESTER Town Centre Built-Up Zone		
	Total Gross floor area:	4200 sqm	
	Survey date: WEDNESDAY	19/10/11	Survey Type: MANUAL
5	GM-02-A-08 FOUNTAIN STREET	REGUS	GREATER MANCHESTER
	MANCHESTER Town Centre Built-Up Zone		
	Total Gross floor area:	3960 sqm	
	Survey date: MONDAY	26/09/16	Survey Type: MANUAL
6	SO-02-A-01 HIGH STREET	COUNCIL OFFICES	SLOUGH
	SLOUGH Town Centre High Street		
	Total Gross floor area:	1800 sqm	
	Survey date: THURSDAY	27/02/14	Survey Type: MANUAL
7	TV-02-A-04 CORPORATION ROAD	COUNCIL OFFICES	TEES VALLEY
	MIDDLESBROUGH Town Centre Commercial Zone		
	Total Gross floor area:	3950 sqm	
	Survey date: TUESDAY	08/10/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	WK-02-A-01	OFFICES	WARWICKSHIRE
	WARWICK ROAD		
	COVENTRY		
	Town Centre		
	Built-Up Zone		
	Total Gross floor area:	960 sqm	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

BANNERS GATE BIRMINGHAM STREET HALESOWEN

Licence No: 429201

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	8	8675	0.189	8	8675	0.013	8	8675	0.202
07:30 - 08:00	8	8675	0.252	8	8675	0.022	8	8675	0.274
08:00 - 08:30	8	8675	0.288	8	8675	0.024	8	8675	0.312
08:30 - 09:00	8	8675	0.293	8	8675	0.048	8	8675	0.341
09:00 - 09:30	8	8675	0.268	8	8675	0.035	8	8675	0.303
09:30 - 10:00	8	8675	0.183	8	8675	0.043	8	8675	0.226
10:00 - 10:30	8	8675	0.137	8	8675	0.086	8	8675	0.223
10:30 - 11:00	8	8675	0.112	8	8675	0.078	8	8675	0.190
11:00 - 11:30	8	8675	0.071	8	8675	0.068	8	8675	0.139
11:30 - 12:00	8	8675	0.086	8	8675	0.065	8	8675	0.151
12:00 - 12:30	8	8675	0.078	8	8675	0.059	8	8675	0.137
12:30 - 13:00	8	8675	0.076	8	8675	0.066	8	8675	0.142
13:00 - 13:30	8	8675	0.078	8	8675	0.076	8	8675	0.154
13:30 - 14:00	8	8675	0.068	8	8675	0.055	8	8675	0.123
14:00 - 14:30	8	8675	0.045	8	8675	0.052	8	8675	0.097
14:30 - 15:00	8	8675	0.053	8	8675	0.098	8	8675	0.151
15:00 - 15:30	8	8675	0.045	8	8675	0.161	8	8675	0.206
15:30 - 16:00	8	8675	0.061	8	8675	0.218	8	8675	0.279
16:00 - 16:30	8	8675	0.059	8	8675	0.275	8	8675	0.334
16:30 - 17:00	8	8675	0.042	8	8675	0.259	8	8675	0.301
17:00 - 17:30	8	8675	0.027	8	8675	0.363	8	8675	0.390
17:30 - 18:00	8	8675	0.019	8	8675	0.197	8	8675	0.216
18:00 - 18:30	8	8675	0.007	8	8675	0.088	8	8675	0.095
18:30 - 19:00	8	8675	0.037	8	8675	0.056	8	8675	0.093
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.574			2.505			5.079

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	960 - 40000 (units: sqm)
Survey date date range:	01/01/09 - 26/09/16
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix D

Extract from the TRICS database (version 7.4.2)

Town Centre only, - Residential / Flats Privately Owned

Calculation Reference: AUDIT-429201-170801-0811

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

08	NORTH WEST	
	GM GREATER MANCHESTER	2 days
09	NORTH	
	CB CUMBRIA	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 20 to 154 (units:)
 Range Selected by User: 6 to 154 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 09/11/16

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Town Centre	3
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Built-Up Zone	3
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3

3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

25,001 to 50,000

3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

75,001 to 100,000

1 days

500,001 or More

2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0

2 days

1.1 to 1.5

1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No

3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present

3 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CB-03-C-01 KING STREET	BLOCK OF FLATS		CUMBRIA
	CARLISLE Town Centre Built-Up Zone			
	Total Number of dwellings:	40		
	Survey date: THURSDAY	12/06/14		Survey Type: MANUAL
2	GM-03-C-02 WHITWORTH STREET W.	BLOCK OF FLATS		GREATER MANCHESTER
	MANCHESTER Town Centre Built-Up Zone			
	Total Number of dwellings:	154		
	Survey date: THURSDAY	13/10/11		Survey Type: MANUAL
3	GM-03-C-03 FAIRFIELD STREET	BLOCK OF FLATS		GREATER MANCHESTER
	MANCHESTER Town Centre Built-Up Zone			
	Total Number of dwellings:	20		
	Survey date: FRIDAY	14/10/11		Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	71	0.014	3	71	0.037	3	71	0.051
08:00 - 09:00	3	71	0.019	3	71	0.047	3	71	0.066
09:00 - 10:00	3	71	0.014	3	71	0.014	3	71	0.028
10:00 - 11:00	3	71	0.019	3	71	0.028	3	71	0.047
11:00 - 12:00	3	71	0.023	3	71	0.019	3	71	0.042
12:00 - 13:00	3	71	0.019	3	71	0.019	3	71	0.038
13:00 - 14:00	3	71	0.037	3	71	0.042	3	71	0.079
14:00 - 15:00	3	71	0.019	3	71	0.023	3	71	0.042
15:00 - 16:00	3	71	0.019	3	71	0.019	3	71	0.038
16:00 - 17:00	3	71	0.061	3	71	0.023	3	71	0.084
17:00 - 18:00	3	71	0.051	3	71	0.037	3	71	0.088
18:00 - 19:00	3	71	0.047	3	71	0.033	3	71	0.080
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.342			0.341			0.683

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	20 - 154 (units:)
Survey date range:	01/01/09 - 09/11/16
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix E

Details of car (or van availability)

Kirklees 029D, 034B and 039C

LC4415EW - Accommodation type by car or van availability by number of usual residents aged 17 or over in household

ONS Crown Copyright Reserved [from Nomis on 7 September 2017]

population All households
units Persons
date 2011

accomodation type	Flat, maisonette, apartment, caravan or other mobile or temporary structure
no of usual residents in households	One usual resident aged 17 or over in household

Cars or Vans	E01011107 : Kirklees 029D	E01011236 : Kirklees 034B	E01011235 : Kirklees 039C	Total	Average	Parking for project
All categories: Car or van availability	229	356	356	941	(3 areas)	113 flats
No cars or vans in household	177	271	281	729	77.5%	0.0
1 car or van in household	51	78	74	203	21.6%	24.4
2 or more cars or vans in household	1	7	1	9	1.0%	2.5
						27

