



Rochdale Sixth Form College

Transport Assessment

November 2022

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Comments

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1. INTRODUCTION

General

- 1.1. Waterman Infrastructure and Environment Ltd ('Waterman') has been appointed by Rochdale Sixth Form College ('the Applicant') to provide transport planning and highway advice to support a planning application for the proposed new six-storey teaching building (the 'Scheme') as an extension to the existing Rochdale Sixth Form College (RSFC), located on College Road, Rochdale, OL12 6HY (the 'Site').
- 1.2. The proposed extension is located to the north of the existing RSFC building, which has a total gross internal floor area (GIA) of circa 8,707sqm. The existing Site provides 72 car parking spaces including 2 disabled parking spaces located to the northwest of the building as well as a total of 39 cycle parking spaces.
- 1.3. The site is located within the jurisdiction of Rochdale Metropolitan Borough Council (RMBC).
- 1.4. A development masterplan is included at [Appendix A](#).

Document Purpose

- 1.5. This Transport Assessment (TA) considers the highway and transport matters associated with the proposed development, including the existing conditions in terms of active travel modes, the proposed car and cycle parking and the proposed trip generation.

Assessment Scope

- 1.6. This TA has been prepared in accordance with the National Planning Policy Framework (2021) and National Planning Practice Guidance as well as BREEAM 2018 New Construction. The TA includes the following:
 - A review of the transport policy and guidance related to the proposed development;
 - A review of the location of the Site in relation to the surrounding urban area and local transport network;
 - Details of existing local transport conditions including pedestrian and cycling facilities;
 - Details of the development proposals; and
 - A review of the trip generation and impact of the proposed development on the local transport and highway networks.

Policy Context

- 1.7. The strategic transport and development planning policy integral to the development of the scheme are as follows:
 - National Planning Policy Framework (2021);
 - Rochdale Borough Unitary Development Plan (2006); and
 - Rochdale Adopted Core Strategy (2016).

Document Structure

1.8. Following this Introduction, the document is structured as follows:

- **Section 2:** Policy Framework;
- **Section 3:** Existing Situation;
- **Section 4:** Proposed Development;
- **Section 5:** Traffic & Highway Impact;
- **Section 6:** Conclusions.

2. POLICY FRAMEWORK

2.1. The development plan against which the proposed development will be assessed is summarised as:

- National Planning Policy Framework (2021);
- Rochdale Adopted Core Strategy (2016); and
- Rochdale Borough Unitary Development Plan (2006)

National Planning Policy Framework (2021)

2.2. The National Planning Policy Framework was revised in 2021 and is a material consideration in the determination of planning applications. Paragraph 104 of the NPPF states:

‘Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.’*

2.3. Paragraph 105 states:

‘The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.’

2.4. It is also noted in Paragraph 106, to:

‘Provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans)’

2.5. Paragraph 110 notes the following:

‘In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users; and*

c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.'

2.6. Paragraph 111 states:

'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.'

2.7. Paragraph 112 also notes that proposals should:

'Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use.'

2.8. As shown later in this TA, the development proposal is in an area with good access to public transport, can accommodate the movement of goods and waste, and has been designed to promote trips on foot, cycle or by public transport, reducing reliance on private car use.

2.9. It is therefore concluded that the development proposals are in accordance with the general aims of the NPPF.

Rochdale Adopted Core Strategy (2016)

2.10. The Rochdale Adopted Core Strategy sets out the long-term spatial strategy for future development of Rochdale Borough. The core strategy seeks to address the borough's key priorities.

2.11. Regarding delivering sustainable transport, Policy T1 states that the council will work with relevant agencies to secure strategic, borough-wide and local transport improvements that support the overall spatial strategy. It also states that the programme of sustainable transport proposals will ensure accessibility for all users (prioritising low and non-carbon modes of travel in line with the council Accessibility Hierarchy) focusing particularly on town centres, economic growth corridors and regeneration areas. It will also meet borough responsibilities to reduce pollution (NOx and PM10) and climate change (CO2) emissions from traffic to meet GM and national targets. These will be achieved by:

- Improving inter and sub-regional links to neighbouring centres including Manchester City Centre and strategic destinations (e.g. Manchester Airport);
- Improving access to the public transport network and interchange / hub facilities;
- Providing access for all to development focus areas and town centres; and
- Reducing the need to travel and make best use of the existing transport infrastructure.

2.12. With respect to improving accessibility, Policy T2 states that development that offers greater access for all forms of travel will assist the borough's continuous improvement to becoming more sustainable, healthier, greener and prosperous.

2.13. Policy T2 also states that the accessibility will be improved by locating development where good access to public transport is available or can be provided, backed by measures to reduce the need for travel and effective provision for cyclists, pedestrians and people with impaired mobility. Development should be appropriately located to minimise the need to travel by car and the number and length of car trips made to access local amenities. Transport improvements will focus access to

priority regeneration areas, e.g. town centres, housing regeneration areas and economic growth corridors. These will be achieved by:

'Requiring development and infrastructure proposals to satisfy the Council's accessibility hierarchy. This requires transport user needs to be considered and addressed in the following priority order:

- *People with impaired mobility and pedestrians;*
- *Cyclists;*
- *Public transport (Bus, Heavy and Light Rail) and "clean fuelled" vehicles;*
- *Taxi, private hire vehicles;*
- *Powered two wheeled vehicles;*
- *Commercial traffic for local access;*
- *Shopping, visitors / tourist and off peak traffic; and*
- *Long stay and peak time commuter traffic.'*

2.14. Policy T2 also emphasizes that Transport Assessments and Travel Plans are required for:

'All schools and Further Education Institutions (including extensions).'

2.15. The Core Strategy document sets out the parking standards for the borough. [Table 1](#) below shows the car and cycle parking requirements for the proposed use.

Table 1: Car and Cycle Parking Requirement

Development Type	Maximum Standard for Car Parking Provision	Minimum Standard for Cycle Space Provision
Higher or Further Education	1 space per 2FT Equivalent Staff + 1 space per 15 students	1 space per 10FT Equivalent Staff + 1 space per 10 students

2.16. Appendix 5 of the Core Strategy sets out the required provision of disabled car parking which are shown in [Table 2](#) below.

Table 2: Disabled Car Parking Standards

Total Number of Parking Spaces Provided	Minimum Standard of Disabled Car Parking Provision to be Provided
Below 12 spaces	10% of total capacity
12 to 200 spaces	3 bays or 6% of total capacity (whichever is greater)
Over 200 spaces	4 bays plus 4% of total capacity

Rochdale Borough Unitary Development Plan (2006)

2.17. The Unitary Development Plan (UDP) was adopted in June 2006 and aims to guide the future use and development of land and buildings. The UDP main goals are to:

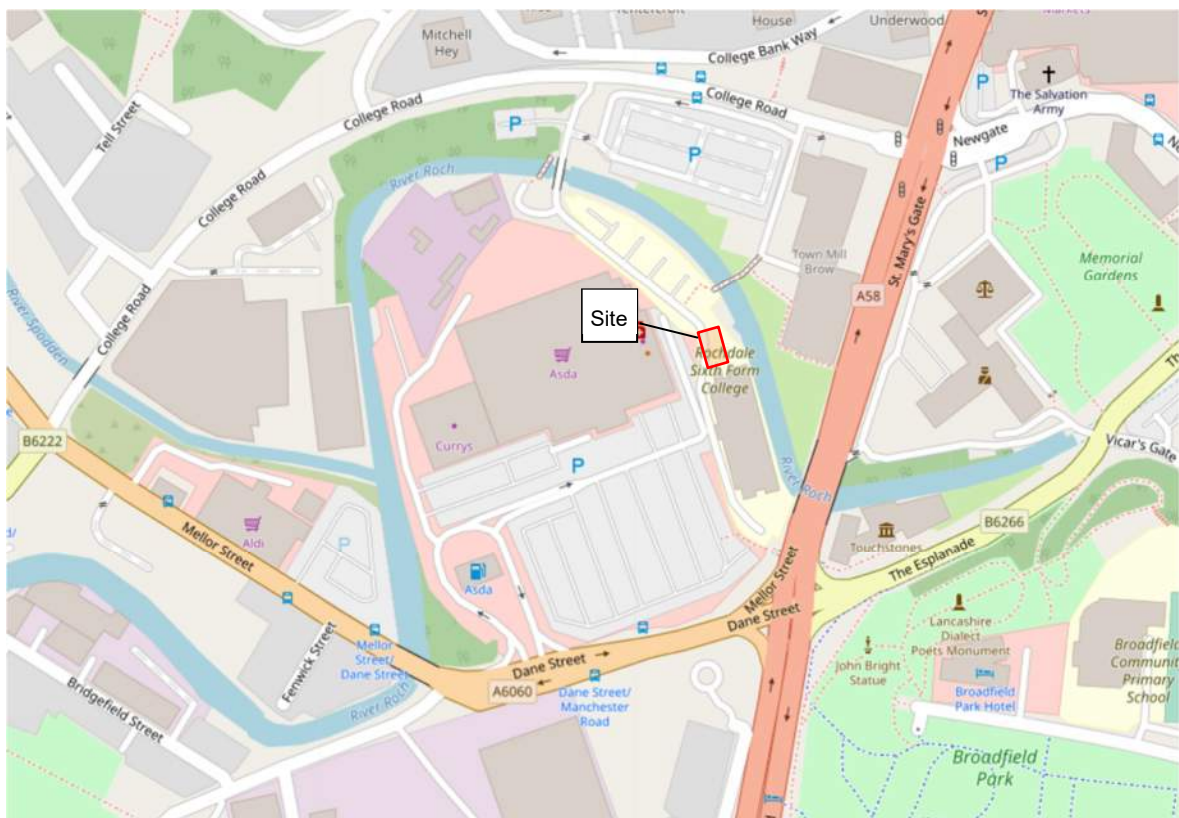
- Control the location and quality of new development;
- Encourage and stimulate new development, where appropriate;
- Protect and improve the environment; and
- Safeguard the Borough's most important natural and built assets.

3. EXISTING SITUATION

Site Description

- 3.1. The Site is located to the west of Rochdale Town Centre, to the north of the existing RSFC building. The Site is bound by the River Roch to the east, Asda Rochdale Superstore to the west, RSFC car park area to the north and the existing RSFC building to the south.
- 3.2. [Figure 1](#) below identifies the location of the proposed Site in the context of the surrounding area.

Figure 1: Proposed Site Location Plan



Source: Open Street Map

- 3.3. The following sections of the Transport Assessment provide an overview of the surrounding transport network, providing a current overview of the walking, cycling and public transport opportunities.

Highway Context

- 3.4. To the north of the site, College Road, a single carriageway, runs in a general east / west alignment between a signalised junction with A58 (St Mary's Gate) / Newgate to the east and a junction with Mellor Street / B6222 to the west of the site. College Road is subject to a 30mph speed limit with Double Yellow Lines present along the road. Footways are provided on both sides of the road apart from the section between the junction with A58 (St Mary's Gate) and the junction with Holmes Street where footway is provided only on the southern side of the road with street lighting in place along its length. Vehicle access to the site is taken via a priority junction with College Road.

- 3.5. A58 (St Mary's Gate) is a major road in Northern England running between Prescot and Wetherby. The A58 is a dual carriageway which runs in a south to north direction providing access to Halifax to the northeast and Bury to the southwest. The road is subject to a 40mph speed limit in the vicinity of the site with street lighting in place along the road.
- 3.6. Newgate is a single carriageway running in a general east / west alignment providing access to the Rochdale Town Centre. The road is subject to a 20mph speed limit with Double Yellow Lines present along the road. Newgate is provided with footways on both side of the road.
- 3.7. To the northwest of the site, College Road forms a priority junction with Holland Street, a single carriageway which provides access to the residential areas to the north of the site. Holland Street is subject to a 30mph speed limit with Double Yellow Lines present on the road. The road is equipped with footways on both sides of the road.

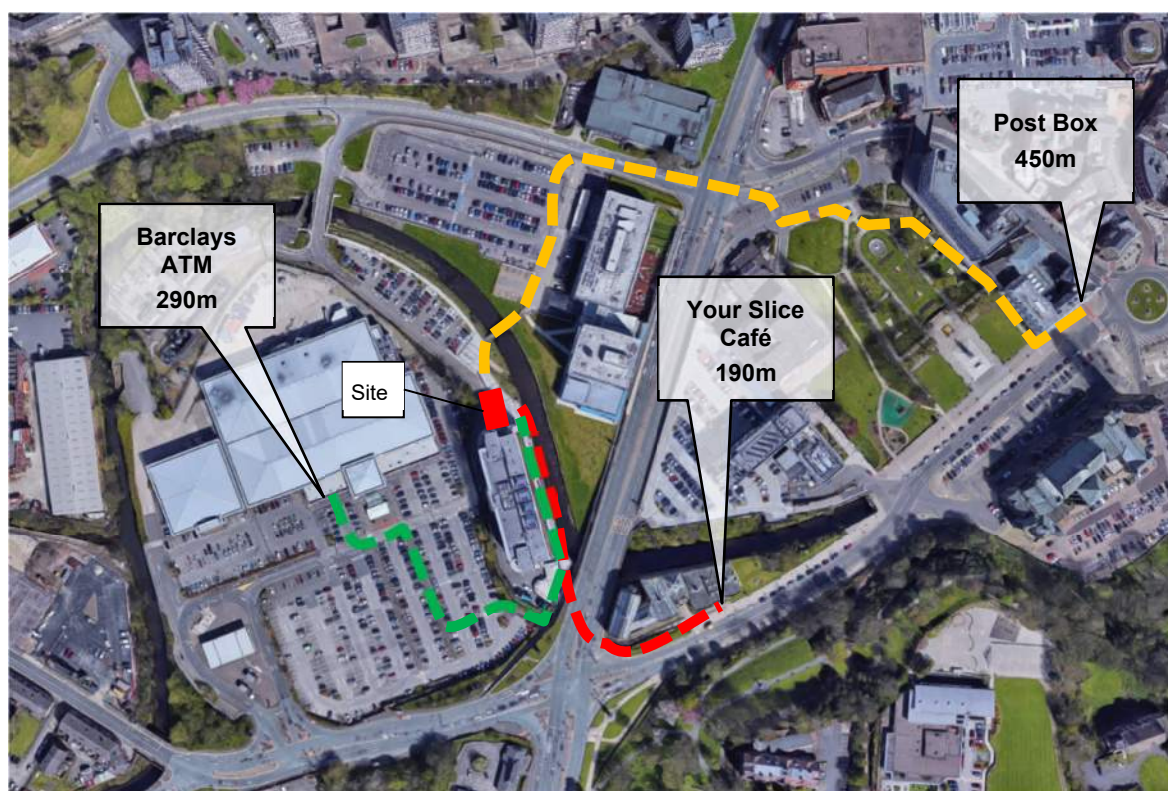
Walking and Cycling Accessibility

- 3.8. The Chartered Institute of Highways and Transport (CIHT) published the guidance document 'Planning for Walking' (2015), which sets out the considered desirable thresholds for a pedestrian walking environment. The document defines a 'walkable neighbourhood' as an area where the majority of amenities are located within 800m walking distance. The document also sets out a desired maximum threshold of 1,600m for walking journeys.
- 3.9. The Site is located within walking distance of both bus and railway links providing connectivity to a number of locations. The Site is within an approximate 200m walking distance of the local bus stop and circa 1.3km of Rochdale Railway Station which provides services to Leeds, Chester, Manchester Victoria and Blackburn.
- 3.10. The CIHT document 'Buses in Urban Development Guidance' (2018) also sets out a typically acceptable threshold of 400m, from the development location to access to a bus stop. The nearest bus stop to the Site is located on College Road, approximately 200m north of the Site. Additional bus stops are also located on Dane Street approximately 240m south of the Site.
- 3.11. As would be expected within a central urban area, a comprehensive footway network including suitable pedestrian crossing facilities surrounds the Site.
- 3.12. College Road is provided with footway on the southern side of the road in the vicinity of the Site which links with further footways to the east and west of the site. Informal pedestrian crossings are provided to the east and west of the site access while formal signalised pedestrian crossing is available at the junction with A58 (St Mary's Gate).
- 3.13. To the immediate northeast of the site, there is a footbridge which crosses the River Roch and links with the footways within the Hopwood Hall College Campus which lead to the footway on College Road.
- 3.14. Pedestrian access is also provided to the south of the Site via an off-road pedestrian route running along the eastern side of the RSFC building towards a subway crossing underneath A58 (St Marys Gate). The subway provides a safe and convenient route between the Site and Rochdale Town Centre including Rochdale Railway Station.
- 3.15. In line with BREEAM 2018 New Construction consideration has been given to the number and type of accessible amenities within 500 metres of the Site. [Table 3](#) presents the required amenities and their associated distances. The locations of the identified amenities relative to the Site are set out in [Figure 2](#).

Table 3: Amenity Access Review

Amenity Requirement	Amenity Present (within 500m)	Summary	Approximate Walking Distance from Site
Appropriate Food Outlet	Yes	Your Slice café	190m
Access to Cash	Yes	Barclays ATM	290M
Postal facility	Yes	Post Box	450m

Figure 2: Location of Amenities



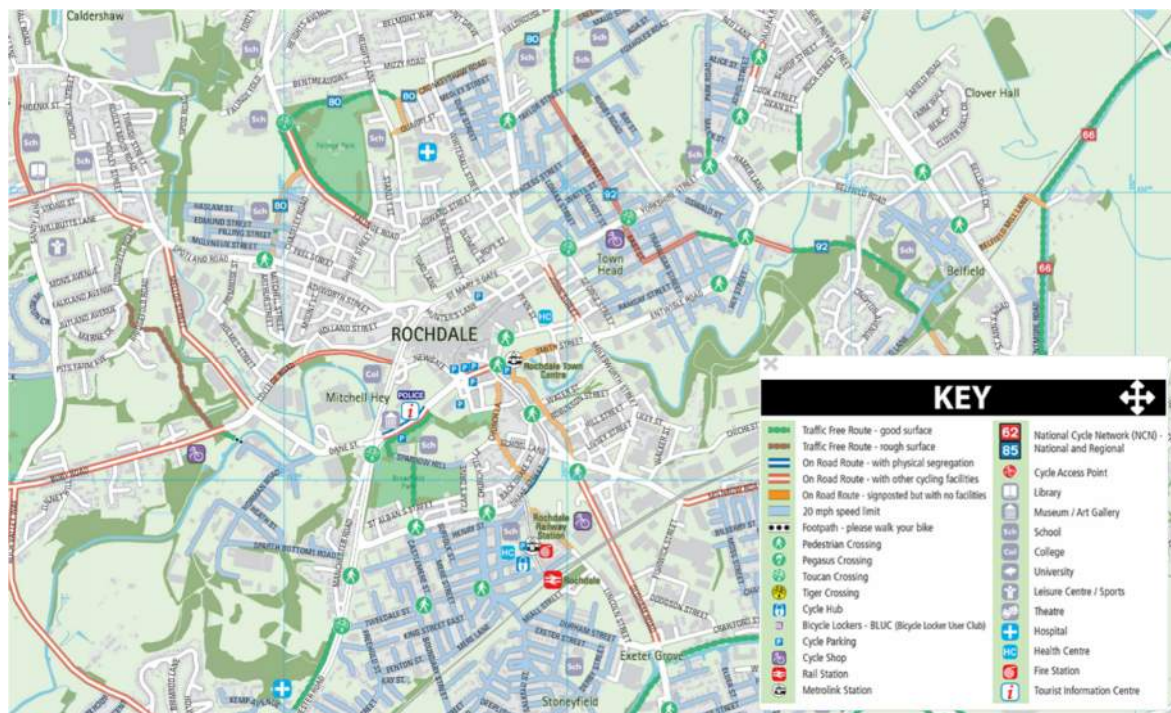
- 3.16. It is evident from Table 3 that the Site is located within an acceptable proximity to the relevant local amenities (within 500m) and therefore accords with BREEAM 2018 New Construction requirements.

Cycle Access

- 3.17. There are a number of on-road cycle routes available surrounding the site, allowing for connection to the local area including Rochdale Town Centre and Rochdale Railway Station. These are accessible through College Road, Mellor Street, Bury Road and The Esplanade.
- 3.18. National and Regional Cycle Routes 80 and 92 are also accessible from Clarke's Lane and Regent Street respectively to the north of the site providing access to the wider area.

- 3.19. The Site is well connected via bicycle with a number of routes and cycle-friendly roads located within close proximity to the Site, as identified in [Figure 3](#) overleaf.

Figure 2: Rochdale Cycle Network



Source: Manchester County Council

Bus Services

- 3.20. The Site is served by a total of 7 bus services operating from Hopwood Hall College bus stop on College Road, St Mary's Gate bus stop on Newgate and Manchester Road bus stop on Dane Street.
- 3.21. The bus stops provide access to bus routes 467/468, 880, R2/R3/R8 and S41 which provide connection within Rochdale and to wider areas such as Bury, Wallbank, Norden and Heywood. The timetables offer services throughout the day providing for both staff and student travel. Overall, the level of bus provision in the area is considered suitable for the Site.

Rail Services

- 3.22. The Site is located within 1.3km of Rochdale Railway Station giving access to the national rail network. Rochdale station is served by the Northern Railway network and offers access to several destinations including Kirkby, Leeds, Manchester Victoria, Blackburn and Chester, with the typical frequencies of service summarised in [Table 4](#) overleaf.

Table 4: Rochdale Rail Station Frequency

Station	Period	Destination/Terminus	Frequency
Rochdale	Peak	Kirkby	1 per hour
		Leeds	3 per hour
		Manchester Victoria	6 per hour
		Blackburn	2 per hour
		Chester	1 per hour
	Off-Peak	Kirkby	1 per hour
		Leeds	3 per hour
		Manchester Victoria	6 per hour
		Blackburn	3 per hour
		Chester	1 per hour

3.23. The Site is well served by regular services, which provide connections to several destinations. Typical journey times from the station are as follows:

- Kirkby (90 minutes);
- Leeds (70 minutes);
- Manchester (15 minutes);
- Blackburn (75 minutes); and
- Chester (74 minutes).

3.24. Rochdale station offers 16 cycle parking spaces with free car parking spaces to the station users on Miall Street.

Existing Workplace Method of Travel

3.25. The National Statistics database has been analysed to ascertain the likely Method of Travel percentage split of those travelling to the local area for employment. Details of the Neighbourhood Statistics census have been obtained for “Workplace Population Method of Travel to Work” for the output area E02001141: Rochdale 010, as provided in Table 5 below.

Table 5: Workplace Population Method of Travel to Work Mode Split (E02001141: Rochdale 010)

Mode of Transport	Percentage	Cumulative
Train	1%	12%
Bus, Minibus or Coach	11%	
Taxi	2%	2%
Motorcycle, Scooter or Moped	1%	1%
Driving a Car or Van	66%	73%
Passenger in a Car or Van	7%	
Bicycle	1%	11%

Mode of Transport	Percentage	Cumulative
On Foot	10%	
Other Method of Travel to Work	0%	0%
Total	100%	100%

- 3.26. The above table indicates that among those travelling to the area for employment, the most popular mode of travel is by car at 73% as driver or passenger, with 12% travelling via public transport (1% by rail and 11% via bus) and 11% travelling to a place of work on foot (10%) or by bicycle (1%).

Road Safety

- 3.27. An assessment of road traffic incident data (STATS19) for the three-year period (2018- 2021), yields the following profile for the RSFC area, including St Mary's Gate, College Road, Dane Street and Mellor Street, as summarised in [Table 6](#) below. Crashmap output data is included at [Appendix B](#).

Table 6: Road Traffic Incident Data (2018- 2021)

Date	Severity	Location	Vehs	Ped	Child	Cycle	Motor-cycle
31/01/18	Slight	Mellor Street	2				
20/02/19	Serious	St Mary's Gate	2				
10/07/19	Slight	St Mary's Gate / Dane Street Junction	2				
31/07/19	Serious	College Road	1	1			1
09/11/19	Slight	St Mary's Gate	2				
06/12/19	Serious	College Road	2			1	
14/03/20	Serious	College Road	1				
15/10/20	Serious	St Mary's Gate / Dane Street Junction	2				1
27/11/20	Serious	College Road	2				1

- 3.28. The above table demonstrates that a total of 9 incidents were recorded during the 36 months between 2018 and 2021; 3 resulted in injuries classified as 'Slight' in severity and 6 resulted in injuries classified as 'Serious'. There were no fatal accidents recorded during the time period within the study area.

- 3.29. Of the 9 recorded accidents, all involved cars/vehicles; with 1 involving a pedestrian, 1 involving a cyclist and 3 recorded accidents involving a motorcycle. The distribution of the recorded accidents within the study area is illustrated by Figure 4 below.

Figure 3: Accident Data



Source: © Crashmap Pro

- 3.30. The data shows that the frequency and severity of incidents around the Site can be generally attributed to driver / rider / individual error, as opposed to systemic road safety issues. As such, there are no identifiable accident clusters or highway safety concerns with respect to the Scheme within the area of the Site.

Summary

- 3.31. Overall, the Site is well served by a number of sustainable access opportunities, which include good quality pedestrian facilities that provide links to existing transport facilities and the nearby residential areas. In addition, the presence of local cycle routes will assist and encourage cycle trips to and from the Site.
- 3.32. At present there is a good level of bus services in the vicinity of the Site, providing connections throughout the area and wider destinations, such as Bury, Wallbank, Norden and Heywood. Rochdale Railway Station provides an alternative to bus travel for longer distance journeys.

4. PROPOSED DEVELOPMENT

Development Description

- 4.1. The proposed development includes construction of a new six-storey extension, circa 1,448 sqm GIA, to the existing RSFC building providing an additional 19 teaching spaces. This will provide capacity to accommodate up to 360 students as part of the established growth of the College. The proposed Site is located to the north of the RSFC building.
- 4.2. The existing RSFC currently has a total of 168 staff and the Applicant advises that the proposed extension will not increase the number of staff of the college.
- 4.3. A scheme masterplan is included at [Appendix A](#).

Site Access

- 4.4. Vehicle access to the Site will continue to be provided via the existing access for the RSFC, via College Road, through the main Hopwood Hall College Campus access and across a bridge over the River Roch to the existing car park.
- 4.5. Pedestrian access to the Site will continue to be provided as per the existing arrangements. The proposed extension will be accessed through the existing entrance to the college building via a reinstated ramp from the south of the RSFC building.
- 4.6. Cycle access to the site will be continue to be provided through the existing vehicle access. Cycle access will also be improved as part of the proposal. A cycle lane will be provided along the site access to the south of the car park towards the bridge.

Proposed Car Parking Provision

- 4.7. The existing RSFC currently provides 72 car parking spaces, including 2 disabled car parking spaces on-site. The construction of the new block will involve removing 4 existing visitor car parking spaces located to the immediate north of the existing RSFC building. These visitor spaces will not be directly re-provided elsewhere within the Site.
- 4.8. Currently no on-site car parking provision is made for students. Student parking is accommodated within surrounding town centre public car parks.
- 4.9. Based upon the parking standards within the Core Strategy document as set out in [Section 2](#) of this TA, a maximum of 84 car parking spaces could be provided for the staff parking requirement of RSFC. In addition, a total of 6% of total bays, equivalent to 5 accessible bays for Blue Badge holders could be expected.
- 4.10. The RSFC site will provide a total of 68 vehicle parking spaces (with the loss of the four visitor bays), including 7 spaces (circa 8% of total capacity) for use by disabled drivers.
- 4.11. The proposed car parking provision falls below, and therefore accords with, the maximum parking requirement set out in the Core Strategy document. However, it is understood that discussions have been held between the Applicant and RMBC with respect to parking demand on-site and it has been advised by the council that the current shortage of on-site car parking spaces could potentially be met by appropriate off-site provision.

- 4.12. It is understood that the RSFC seeks to rent the following car parks within Rochdale Town Centre:
- Rochdale Leisure Centre (15 minutes walking distance) – 40 car parking spaces available; and
 - Rochdale Exchange Parking (11 minutes walking distance) – 40 car parking spaces available.
- 4.13. Given the potential to use the available car parks within the Rochdale town centre and the Site's excellent accessibility to alternative modes of travel (on foot, by bicycle and public transport), the proposed provision is deemed to be acceptable.

Cycle Parking

- 4.14. Based upon the parking standards within the Core Strategy document as set out in [Section 2](#), a minimum of 36 cycle parking spaces are required for the projected student capacity of the Scheme (360 students).
- 4.15. The existing RSFC is served by a total of 39 cycle parking spaces, comprising 23 cycle lockers located below the undercroft to the rear of the main RSFC building, and 16 spaces in the form of Sheffield stands on the river frontage.
- 4.16. It is understood from the Applicant that the existing on-site cycle parking spaces are not currently well utilised. It is therefore considered that the existing cycle parking provision will be sufficient to serve the Scheme alongside the existing RSFC demand. No additional cycle parking provision is proposed.

Servicing & Refuse Collection

- 4.17. Servicing, refuse collection and access to the proposed extension for deliveries and emergencies will continue to be undertaken as per the existing arrangement via the main RFSC access. Servicing vehicles will continue to utilise the south-eastern service yard area of the college site as a turning area. The movement of refuse and deliveries between the vehicle and the college buildings will be managed by the college.

5. TRIP GENERATION & HIGHWAY IMPACT

General

- 5.1. This section considers the likely multi-modal trips that the proposed Scheme would be expected to generate.
- 5.2. The likely trip generation of the proposed Scheme will be assessed against the trips generated by the existing RSFC to show the transport impacts of the proposed uplift.

Trip Generation

Existing Trip Generation – RSFC (8,707sqm)

- 5.3. Suitable sites within the TRICS database have been selected for the existing RSFC. The following TRICS selection parameters have been applied:
 - Land use: Education;
 - Category: College / University;
 - Floor area range: 2,000 – 20,000sqm;
 - Location: United Kingdom excluding London; and
 - Average trip rates selected.
- 5.4. The total person trip rates for the existing RSFC (8,707sqm) are presented in [Table 7](#) and the TRICS output reports are included in [Appendix C](#).

Table 7: Weekday College / University Trip Rates per 100sqm

Trip Rate	AM Peak Hour (09:00-10:00)		PM Peak Hour (17:00-18:00)		Daily (07:00-22:00)	
	In	Out	In	Out	In	Out
Total Person Trip Rates	2.313	0.635	0.739	1.115	11.454	11.399
Total Person Trips	201	55	64	97	997	993

- 5.5. The 2011 Census Method of Travel to Work (Workplace Population) ([Table 5](#)) has been applied to the total person trip rates derived from TRICS in order to calculate the multi-modal trip generation for the existing RSFC. The multi-modal trip generation is presented in [Table 8](#).

Table 8: Existing Multi-Modal Trip Generation

Mode	Mode Share (%)	AM Peak Hour (09:00-10:00)		PM Peak Hour (17:00-18:00)		Daily (07:00-22:00)	
		In	Out	In	Out	In	Out
Train	1%	2	1	1	1	10	10
Bus, Minibus or Coach	11%	22	6	7	11	110	109
Taxi	2%	4	1	1	2	20	20
Motorcycle, Scooter or Moped	1%	2	1	1	1	10	10
Driving a Car or Van	66%	133	36	42	64	658	655
Passenger in a Car or Van	7%	14	4	5	7	70	69
Bicycle	1%	2	1	1	1	10	10
On Foot	10%	20	6	6	10	100	99
Other	0%	0	0	0	0	0	0
Total	100%	201	55	64	97	997	993

- 5.6. [Table 8](#) shows that the existing RSFC is likely to generate 169 two-way vehicle movements and 256 two-way total person movements in the morning peak hour and 106 two-way vehicle movements and 161 two-way total person movements in the evening peak hour. Over an average day there would be approximately 1,313 two-way vehicle trips and 1,990 two-way total person trips.

Proposed Trip Generation – Proposed RSFC (10,155 sqm)

- 5.7. The total person trip rates ([Table 7](#)) have been applied to the 2011 Census Method of Travel to Work (Workplace Population) ([Table 5](#)) on the same basis as the existing trip generation in order to calculate the multi-modal trip generation for the proposed new RSFC (totalling 10,155 sqm) following the completion of the Scheme (an extension of 1,448 sqm). The resultant number of trips per mode during the morning and evening peak hours, are summarised in [Table 9](#) below.

Table 9: Multi-Modal Trip Generation – Proposed RSFC (10,155 sqm)

Mode	Mode Share (%)	AM Peak Hour (09:00-10:00)		PM Peak Hour (17:00-18:00)		Daily (07:00-22:00)	
		In	Out	In	Out	In	Out
Train	1%	2	1	1	1	12	12
Bus, Minibus or Coach	11%	26	7	8	12	128	127
Taxi	2%	5	1	2	2	23	23
Motorcycle, Scooter or Moped	1%	2	1	1	1	12	12
Driving a Car or Van	66%	155	43	50	75	768	764
Passenger in a Car or Van	7%	16	5	5	8	81	81
Bicycle	1%	2	1	1	1	12	12
On Foot	10%	23	6	8	11	116	116
Other	0%	0	0	0	0	0	0
Total	100%	235	64	75	113	1163	1158

- 5.8. It can be seen in [Table 9](#) that the proposed RSFC is forecast to result in 198 two-way vehicle movements and 299 two-way total person movements in the morning peak hour and 125 two-way vehicle movements and 188 two-way total person movements in the evening peak hour. Over an average day there would be approximately 1,532 two-way vehicle trips and 2,321 two-way total person trips.

Net Change in Trip Generation

- 5.9. The net change in the multi-modal trip generation between the existing and proposed RSFC is shown in [Table 10](#).

Table 10: Net Change in Multi-Modal Trip Generation

Mode	AM Peak Hour (09:00-10:00)		PM Peak Hour (17:00-18:00)		Daily (07:00-22:00)	
	In	Out	In	Out	In	Out
Train	0	0	0	0	2	2
Bus, Minibus or Coach	4	1	1	2	18	18
Taxi	1	0	0	0	3	3
Motorcycle, Scooter or Moped	0	0	0	0	2	2
Driving a Car or Van	22	6	7	11	109	109
Passenger in a Car or Van	2	1	1	1	12	12
Bicycle	0	0	0	0	2	2
On Foot	3	1	1	2	17	17
Other	0	0	0	0	0	0
Total	33	9	11	16	166	165

- 5.10. Table 10 shows that there will be a slight increase of 28 two-way vehicle movements (equivalent to less than one car per minute) in the morning peak hour and 18 two-way vehicle movements (equivalent to less than one car per minute) in the evening peak hour. Over an average day there would be an increase of 218 two-way vehicle trips associated with the Site.
- 5.11. Although there will be a small increase in vehicle movements in the morning peak hour and evening peak hour, these are very low increases and will have no significant impact on the local transport network.
- 5.12. It also should be noted that the forecast level of vehicle movements can be considered a worst-case scenario, based upon Census mode share data. The planning application is supported by a Travel Plan which will set targets for modal shift away from the private car towards more sustainable and active modes of travel.
- 5.13. It is therefore concluded that the additional trips by all modes associated with the Scheme can easily be accommodated on the surrounding networks.

6. CONCLUSIONS

Summary

- 6.1. Waterman Infrastructure and Environment Ltd ('Waterman') has been appointed by Rochdale Sixth Form College ('the Applicant') to provide transport planning and highway advice to support a planning application for the proposed new six-storey teaching building as an extension to the existing RSFC.
- 6.2. The proposed extension is located to the north of the existing RSFC building. The site is within the jurisdiction of Rochdale Metropolitan Borough Council (RMBC).
- 6.3. The existing RSFC building has a total gross internal floor area (GIA) of circa 8,707 sqm and provides 72 car parking spaces including 2 disabled parking spaces located to the northwest of the building as well as a total of 39 cycle parking spaces.
- 6.4. The college is well served by a number of sustainable access opportunities, which include good quality pedestrian facilities that provide links to existing transport facilities and Rochdale town centre. In addition, the presence of local cycle routes will assist and encourage cycle trips to and from the college, which would most likely be student related.
- 6.5. At present there is a good level of bus services serving the site, providing connections throughout the area and wider destinations, such as Bury, Wallbank, Norden and Heywood. Rochdale Railway Station provides an alternative to bus travel for longer distance journeys.
- 6.6. The construction of the new block will involve removing 4 of the existing visitor car parking spaces located to the immediate north of the existing RSFC building. These spaces will not be re-provided elsewhere on-site. Ample public parking provision is available within Rochdale town centre car parks within the vicinity of the Site.
- 6.7. The RSFC site will provide a total of 68 vehicle parking spaces (following removal of the four visitor bays), including 7 spaces (circa 8% of total capacity) for use by disabled drivers.
- 6.8. An existing total of 39 cycle parking spaces, comprising 23 cycle lockers located below the undercroft to the rear of the main RSFC building, and 16 spaces in the form of Sheffield stands on the river frontage are provided within the RSFC.
- 6.9. Whilst the proposed uplift will cause a small increase in vehicle movements in AM and PM Peak hours, it is deemed that these will have no significant impact on the local transport network.

Conclusion

- 6.10. This TA has demonstrated that the uplift in multi-modal trips associated with the proposed Scheme can be accommodated within the surrounding transport and highway networks, without material impact upon capacity or highway safety.
- 6.11. Therefore, the assessment shows that the impacts of the proposed development are not severe, in accordance with the requirements of NPPF Paragraph 111, and that there are no material reasons on highways and transport grounds why the planning application should not be approved.

APPENDICES

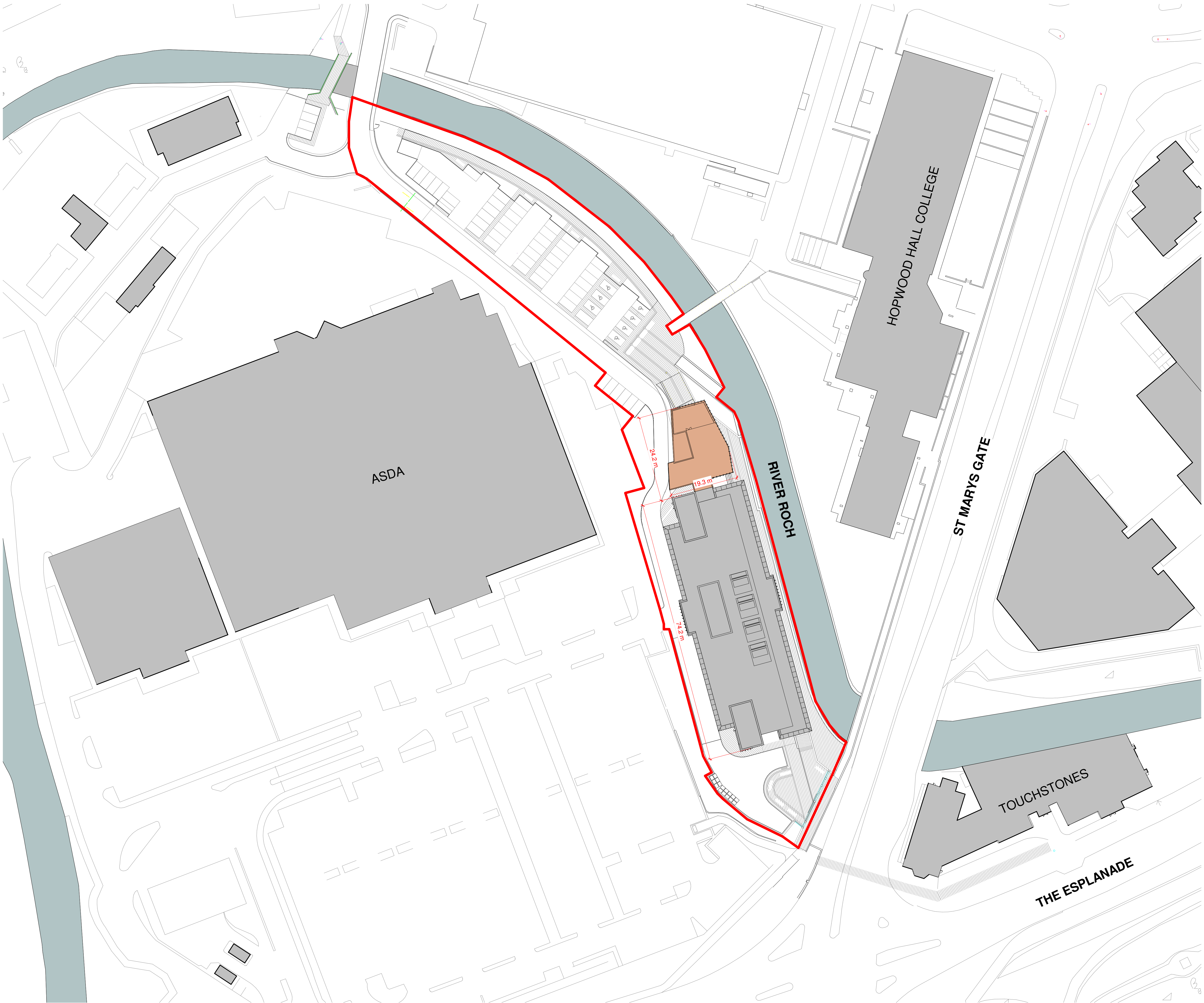
A. Site Layout Plan/Masterplan

Appendices

Rochdale Sixth Form College

Project Number: WIE19085

Document Reference: WIE19085.101.R.1.1.3.TA



NOTE:
1. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ARCHITECT.
2. ALL DIMENSIONS TO BE SITE CHECKED & VERIFIED BY THE CONTRACTOR PRIOR TO THE MANUFACTURE OR ORDER OF ANY MATERIALS OR GOODS.

KEY:
— PROPOSAL BOUNDARY



P2	Planning Permission Submission	02.11.22
P1	Issued for comment	28.10.22
Rev	Description	Date

PLANNING
Rochdale Sixth Form College
College Road, Rochdale, OL12 6HY

Proposed Site Plan

DRAWING NUMBER
3940-A-1002P

DATE 10/25/22	REVISION P2	STATUS PURPOSE OF ISSUE
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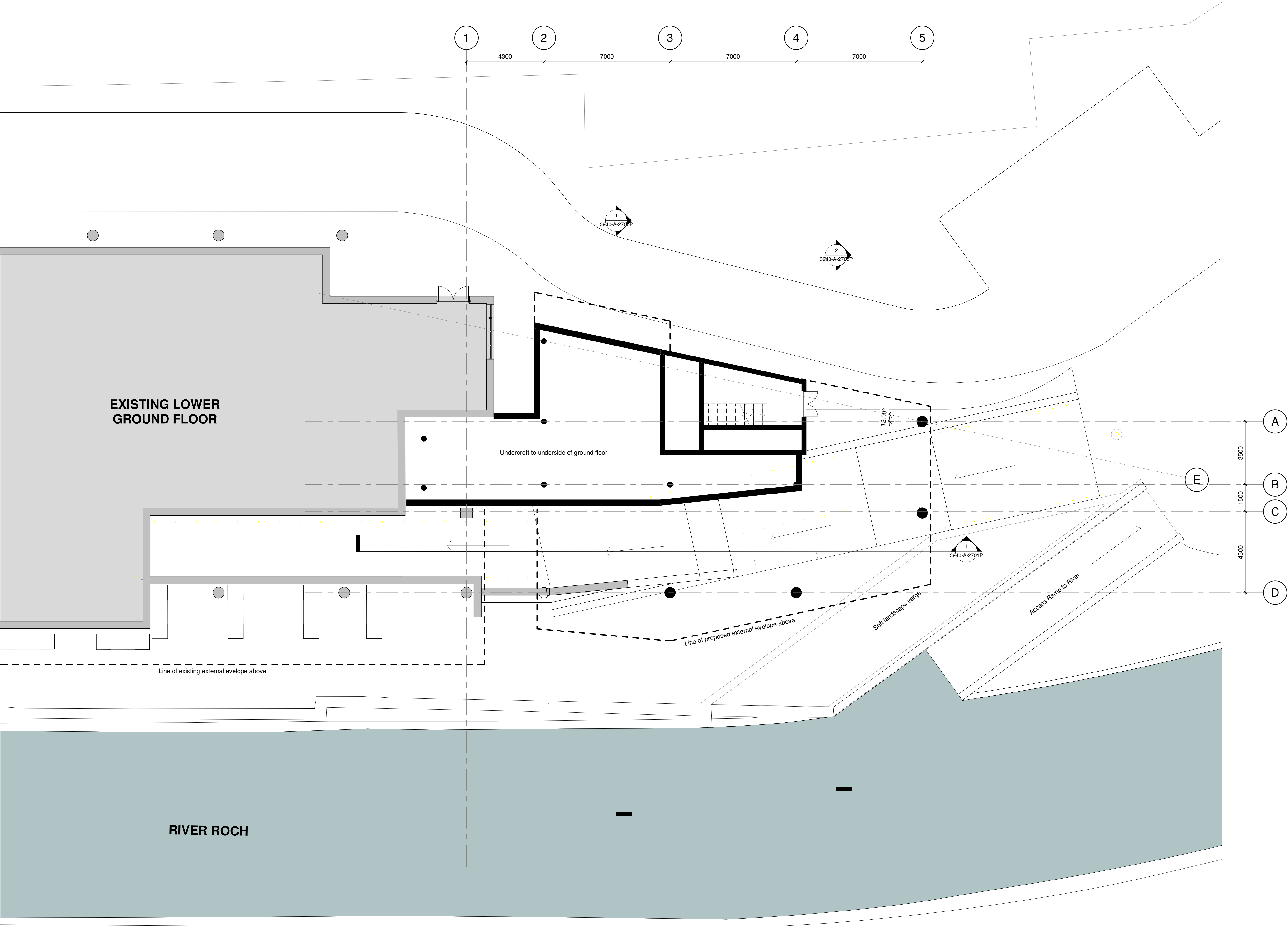
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architecture building workshop

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©
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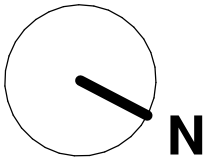
NOTE:
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KEY:

- Social Space
- Teaching Space
- Ancillary Space
- Roof Garden
- Circulation



Proposed GA Lower Ground Plan
1 : 100



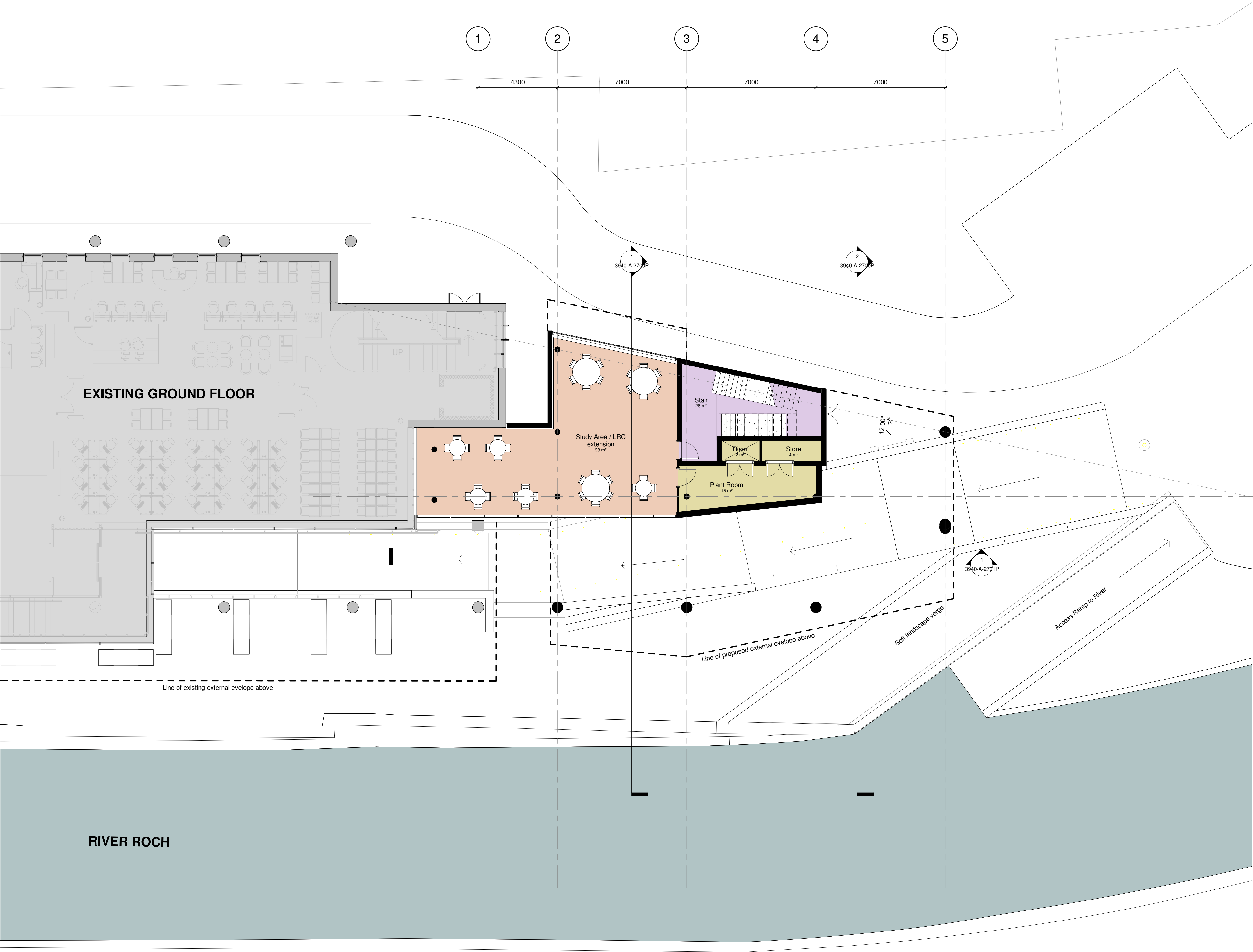
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P1	Issued for comment	28.10.22
Rev	Description	Date
PLANNING		
Rochdale Sixth Form College College Road, Rochdale, OL12 6HY		
Proposed GA Lower Ground Plan		
DRAWING NUMBER 3940-A-2000P		
DATE 10/13/22	REVISION P2	STATUS
SCALE 1 : 100	PURPOSE OF ISSUE	
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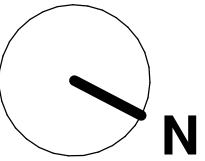
NOTE:
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2. ALL DIMENSIONS TO BE SITE CHECKED & VERIFIED BY THE CONTRACTOR PRIOR TO THE MANUFACTURE OR ORDER OF ANY MATERIALS OR GOODS.

KEY:

- Study Space / IRC extension
- Teaching Space
- Ancillary Space
- Roof Garden
- Circulation



Proposed GA Ground Floor Plan
1 : 100

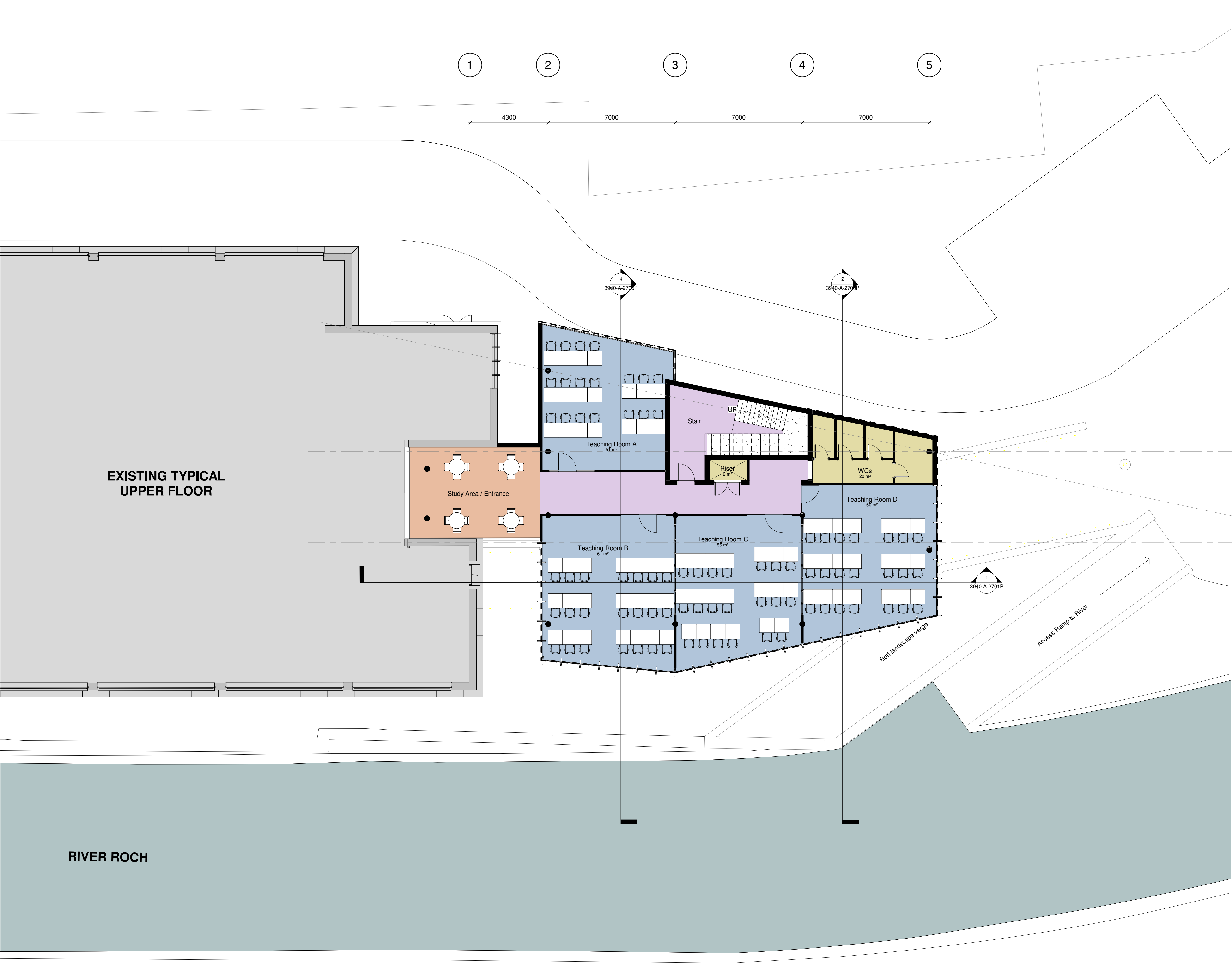


P2	Planning Permission Submission	02.11.22
P1	Issued for comment	28.10.22
Rev	Description	Date
PLANNING		
Rochdale Sixth Form College College Road, Rochdale, OL12 6HY		
Proposed GA Ground Floor Plan		
DRAWING NUMBER 3940-A-2001P		
DATE 09/30/22	REVISION P2	STATUS PURPOSE OF ISSUE
SCALE 1 : 100		
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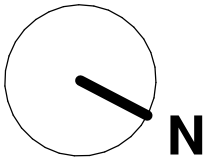
KEY:

- Study Space / IRC extension
- Teaching Space
- Ancillary Space
- Roof Garden
- Circulation



Proposed GA Typical Upper Floor Plan (Levels 01 - 04)

1 : 100



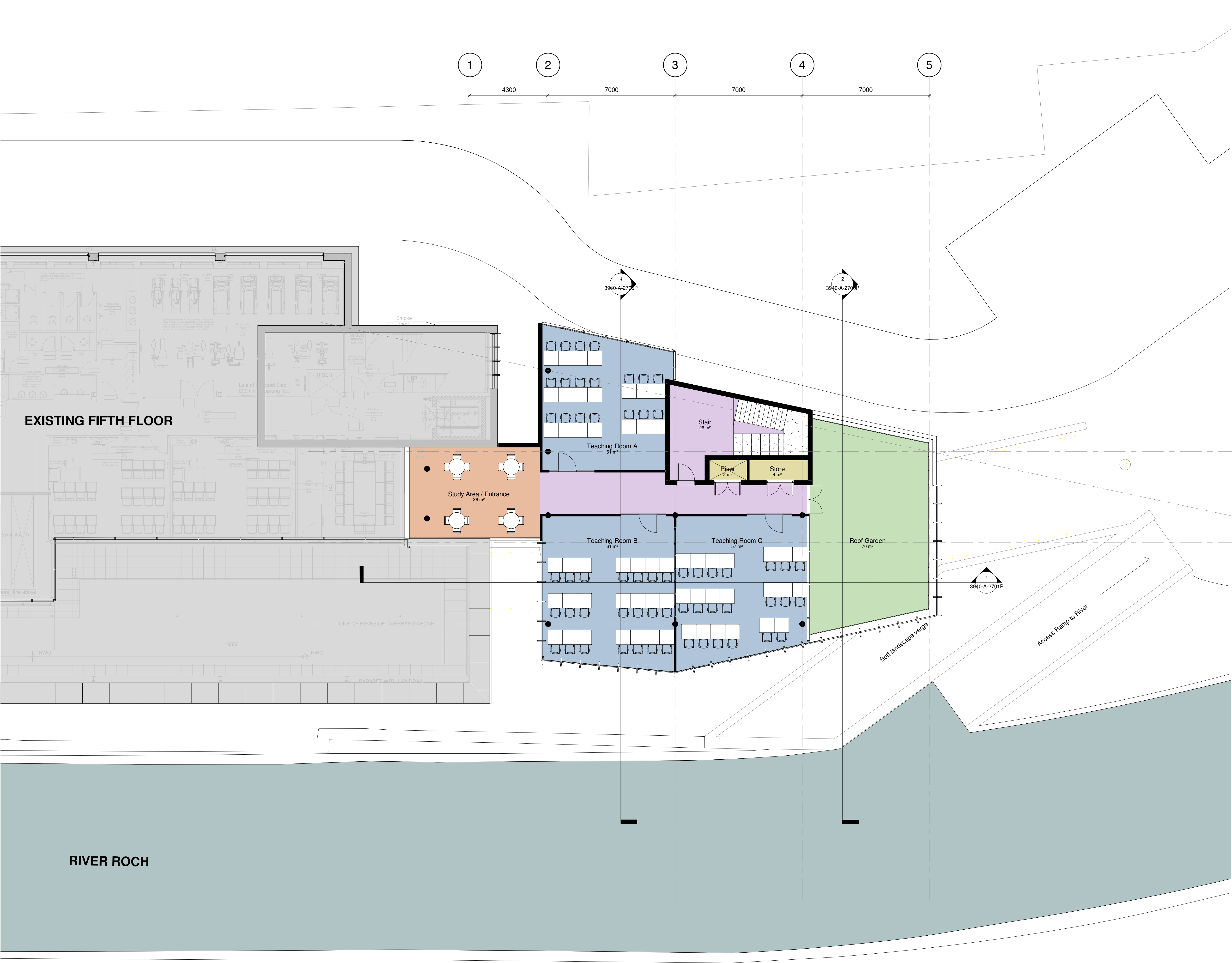
P2	Planning Permission Submission	02.11.22
P1	Issued for comment	28.10.22
Rev	Description	Date
PLANNING		
Rochdale Sixth Form College College Road, Rochdale, OL12 6HY		
Proposed GA Typical Upper Floor Plan (Levels 01-04)		
DRAWING NUMBER 3940-A-2002P		
DATE 09/30/22	REVISION P2	STATUS
SCALE 1 : 100	PURPOSE OF ISSUE	
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KEY:

- Study Space / IRC extension
- Teaching Space
- Ancillary Space
- Roof Garden
- Circulation



Proposed GA Fifth Floor Plan
1 : 100

P2	Planning Permission Submission	02.11.22
P1	Issued for comment	28.10.22
Rev	Description	Date

PLANNING

Rochdale Sixth Form College
College Road, Rochdale, OL12 6HY

Proposed GA Fifth Floor Plan

DRAWING NUMBER
3940-A-2003P

DATE 09/30/22	REVISION P2	STATUS PURPOSE OF ISSUE
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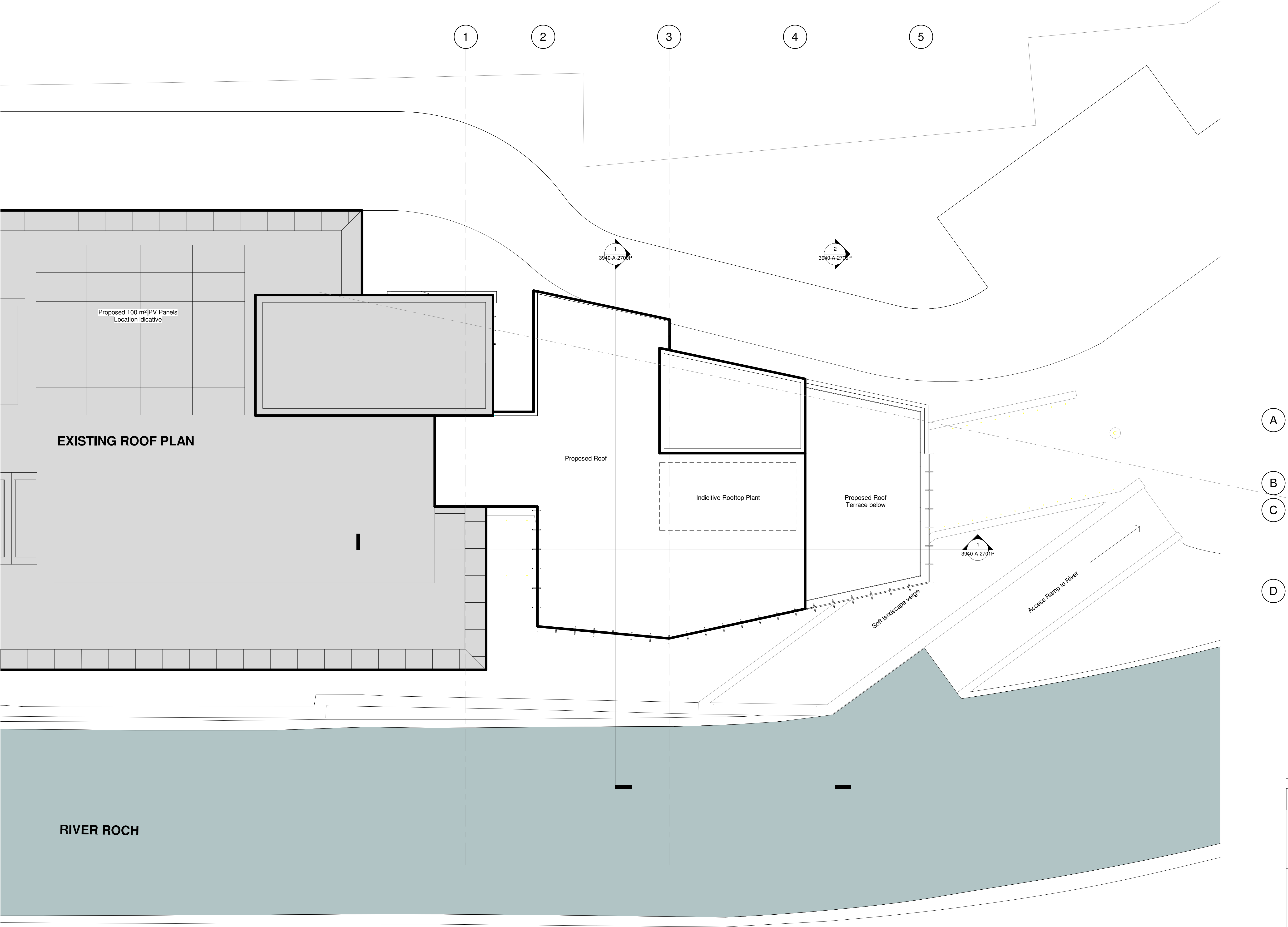
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KEY:

- Social Space
- Teaching Space
- Ancillary Space
- Roof Garden
- Circulation



Proposed GA Roof Plan
1 : 100

P2	Planning Permission Submission	02.11.22
P1	Issued for comment	28.10.22
Rev	Description	Date
PLANNING		
Rochdale Sixth Form College College Road, Rochdale, OL12 6HY		
Proposed GA Roof Plan		
DRAWING NUMBER		
3940-A-2004P		
DATE	REVISION	STATUS
10/25/22		P2
SCALE	PURPOSE OF ISSUE	
1 : 100		
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B. Crashmap Output Data

Appendices

Rochdale Sixth Form College

Project Number: WIE19085

Document Reference: WIE19085.101.R.1.1.3.TA

OBJECTID	Accident_ID	Carriage way_Hazards	Severity	Officer_Atten- ded	Accident_DateTime	Year	Number_of_veh- icles	Number_of_casual- ties	Easting	Northing	Highway_Authority	Road_Nu- mber	Weather_conds- itions	Road_Type	Road_surface	Speed_Limit	Light_conditions	Junction_detail	Pedestrian_Crossing	Involved_pedalcy- cle	Involved_Motorcycl- e	Pedestrian_casualty	Child_casualty	Pedal_cycle_user_casualty	Motorcyclist_user_casualty	Involved_car	Involved_goodsveh- icle	Involved_Bus	Involved_young_driver	Longitude	Latitude	Local_Authority_District	Junction_control	Is_Provisional	Is_Amen- ded	Web_Link	x	y
97800	202006P169976	None	Serious	Police officer attended crash scene	March 14, 2020	2020	1	2	389102	413430	Rochdale	U0	Fine without high winds	Single carriageway	Wet or Damp	30	Daylight: regardless of presence of streetlights	T or staggered junction	Central refuge - no other controls	0	0	0	0	0	0	1	0	0	0	-2.16622	53.61732	Rochdale Metropolitan Borough	Give way or uncontrolled	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=202006P169976	4E+05	413430
177074	202006P178053	None	Serious	Police officer attended crash scene	November 27, 2020	2020	2	1	389080	413424	Rochdale	U0	Fine without high winds	Single carriageway	Dry	30	Darkness: street lights present and lit	T or staggered junction	No physical crossing facility within 50 metres	0	1	0	0	0	1	1	0	0	1	-2.16655	53.61726	Rochdale Metropolitan Borough	Give way or uncontrolled	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=202006P178053	4E+05	413424
283140	201806P140509	None	Slight	Police officer attended crash scene	January 31, 2018	2018	2	1	389098	413107	Rochdale	A6060	Snowing without high winds	Single carriageway	Snow	30	Daylight: regardless of presence of streetlights	T or staggered junction	Pedestrian phase at traffic signal junction	0	0	0	0	0	0	1	0	0	0	-2.16627	53.61441	Rochdale Metropolitan Borough	Auto traffic signal	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=201806P140509	4E+05	413107
307056	202006P176553	None	Serious	Police officer attended crash scene	October 15, 2020	2020	2	1	389323	413143	Rochdale	A58	Fine without high winds	Dual carriageway	Wet or Damp	40	Darkness: street lights present and lit	Crossroads	Pedestrian phase at traffic signal junction	0	1	0	0	0	1	1	0	0	1	-2.16287	53.61474	Rochdale Metropolitan Borough	Auto traffic signal	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=202006P176553	4E+05	413143
429599	201906P166762	None	Serious	Police officer attended crash scene	December 6, 2019	2019	2	1	389078	413424	Rochdale	U0	Fine without high winds	Single carriageway	Wet or Damp	30	Darkness: street lights present and lit	T or staggered junction	No physical crossing facility within 50 metres	1	0	0	0	1	0	1	0	0	0	-2.16658	53.61726	Rochdale Metropolitan Borough	Give way or uncontrolled	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=201906P166762	4E+05	413424
1E+06	201906P158944	None	Slight	Police officer attended crash scene	July 10, 2019	2019	2	1	389313	413132	Rochdale	A58	Fine without high winds	Dual carriageway	Dry	40	Daylight: regardless of presence of streetlights	Crossroads	Pedestrian phase at traffic signal junction	0	0	0	0	0	0	1	0	0	0	-2.16302	53.61464	Rochdale Metropolitan Borough	Auto traffic signal	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=201906P158944	4E+05	413132
1E+06	201906P164289	None	Slight	Police officer attended crash scene	November 9, 2019	2019	2	2	389332	413184	Rochdale	A58	Fine without high winds	Dual carriageway	Wet or Damp	40	Daylight: regardless of presence of streetlights	Not at or within 20 metres of junction	No physical crossing facility within 50 metres	0	0	0	0	0	0	1	0	0	0	-2.16273	53.61511	Rochdale Metropolitan Borough	Not Applicable	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=201906P164289	4E+05	413184
1E+06	201906P160255	None	Serious	Police officer attended crash scene	July 31, 2019	2019	1	1	388906	413262	Rochdale	U0	Fine without high winds	Single carriageway	Dry	30	Daylight: regardless of presence of streetlights	Crossroads	No physical crossing facility within 50 metres	0	1	1	0	0	0	0	0	0	1	-2.16917	53.6158	Rochdale Metropolitan Borough	Auto traffic signal	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=201906P160255	4E+05	413262
1E+06	201906P154116	None	Serious	Police officer attended crash scene	February 20, 2019	2019	2	4	389408	413418	Rochdale	A58	Fine without high winds	Dual carriageway	Dry	40	Darkness: street lights present and lit	T or staggered junction	Pedestrian phase at traffic signal junction	0	0	0	1	0	0	1	0	0	1	-2.16159	53.61721	Rochdale Metropolitan Borough	Auto traffic signal	No	No	https://www.crashmap.co.uk/reports/prereportservice?reportId=201906P154116	4E+05	413418

C. TRICS Database Output Data

Appendices

Rochdale Sixth Form College

Project Number: WIE19085

Document Reference: WIE19085.101.R.1.1.3.TA

Calculation Reference: AUDIT-701701-220512-0512

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
 Category : C - COLLEGE/UNIVERSITY
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days

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

Primary 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: 5700 to 19330 (units: sqm)
 Range Selected by User: 2000 to 20000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 25/04/18

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
Wednesday	1 days

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

Selected survey types:

Manual count	2 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:

Edge of Town Centre	2
---------------------	---

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:

Residential Zone	1
Built-Up Zone	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:

F1(a)	2 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 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

15,001 to 20,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

1.1 to 1.5	2 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	1 days
No	1 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	2 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	CA-04-C-02	COLLEGE	CAMBRIDGESHIRE
	BROOK STREET		
	PETERBOROUGH		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	5700 sqm	
	Survey date: MONDAY	17/10/16	Survey Type: MANUAL
2	WS-04-C-06	UNIVERSITY OF CHICHESTER	WEST SUSSEX
	UPPER BOGNOR ROAD		
	BOGNOR REGIS		
	Edge of Town Centre		
	Residential Zone		
	Total Gross floor area:	19330 sqm	
	Survey date: WEDNESDAY	25/04/18	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.

Waterman Boreham Regent House Brentwood

Licence No: 701701

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.36

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 - 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	2	12515	0.236	2	12515	0.040	2	12515	0.276
08:00 - 09:00	2	12515	1.011	2	12515	0.124	2	12515	1.135
09:00 - 10:00	2	12515	1.043	2	12515	0.216	2	12515	1.259
10:00 - 11:00	2	12515	0.236	2	12515	0.192	2	12515	0.428
11:00 - 12:00	2	12515	0.272	2	12515	0.268	2	12515	0.540
12:00 - 13:00	2	12515	0.320	2	12515	0.396	2	12515	0.716
13:00 - 14:00	2	12515	0.304	2	12515	0.236	2	12515	0.540
14:00 - 15:00	2	12515	0.184	2	12515	0.384	2	12515	0.568
15:00 - 16:00	2	12515	0.220	2	12515	0.563	2	12515	0.783
16:00 - 17:00	2	12515	0.096	2	12515	0.587	2	12515	0.683
17:00 - 18:00	2	12515	0.368	2	12515	0.619	2	12515	0.987
18:00 - 19:00	2	12515	0.328	2	12515	0.328	2	12515	0.656
19:00 - 20:00	2	12515	0.144	2	12515	0.515	2	12515	0.659
20:00 - 21:00	2	12515	0.060	2	12515	0.188	2	12515	0.248
21:00 - 22:00	2	12515	0.028	2	12515	0.164	2	12515	0.192
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.850			4.820			9.670

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.

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Parameter summary

Trip rate parameter range selected: 5700 - 19330 (units: sqm)
 Survey date range: 01/01/14 - 25/04/18
 Number of weekdays (Monday-Friday): 2
 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.

Waterman Boreham Regent House Brentwood

Licence No: 701701

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL OGVS

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 - 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	2	12515	0.000	2	12515	0.000	2	12515	0.000
08:00 - 09:00	2	12515	0.004	2	12515	0.000	2	12515	0.004
09:00 - 10:00	2	12515	0.004	2	12515	0.004	2	12515	0.008
10:00 - 11:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
11:00 - 12:00	2	12515	0.008	2	12515	0.004	2	12515	0.012
12:00 - 13:00	2	12515	0.000	2	12515	0.004	2	12515	0.004
13:00 - 14:00	2	12515	0.008	2	12515	0.008	2	12515	0.016
14:00 - 15:00	2	12515	0.008	2	12515	0.008	2	12515	0.016
15:00 - 16:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
16:00 - 17:00	2	12515	0.000	2	12515	0.004	2	12515	0.004
17:00 - 18:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
18:00 - 19:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
19:00 - 20:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
20:00 - 21:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
21:00 - 22:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.032			0.032			0.064

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.

Waterman Boreham Regent House Brentwood

Licence No: 701701

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.36

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 - 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	2	12515	0.491	2	12515	0.180	2	12515	0.671
08:00 - 09:00	2	12515	1.814	2	12515	0.392	2	12515	2.206
09:00 - 10:00	2	12515	2.313	2	12515	0.635	2	12515	2.948
10:00 - 11:00	2	12515	0.691	2	12515	0.555	2	12515	1.246
11:00 - 12:00	2	12515	0.815	2	12515	0.739	2	12515	1.554
12:00 - 13:00	2	12515	0.911	2	12515	1.266	2	12515	2.177
13:00 - 14:00	2	12515	0.911	2	12515	0.811	2	12515	1.722
14:00 - 15:00	2	12515	0.667	2	12515	0.879	2	12515	1.546
15:00 - 16:00	2	12515	0.675	2	12515	1.207	2	12515	1.882
16:00 - 17:00	2	12515	0.372	2	12515	1.039	2	12515	1.411
17:00 - 18:00	2	12515	0.739	2	12515	1.115	2	12515	1.854
18:00 - 19:00	2	12515	0.663	2	12515	0.795	2	12515	1.458
19:00 - 20:00	2	12515	0.248	2	12515	0.955	2	12515	1.203
20:00 - 21:00	2	12515	0.104	2	12515	0.475	2	12515	0.579
21:00 - 22:00	2	12515	0.040	2	12515	0.356	2	12515	0.396
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			11.454			11.399			22.853

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.

Waterman Boreham Regent House Brentwood

Licence No: 701701

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL CARS

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 - 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	2	12515	0.216	2	12515	0.032	2	12515	0.248
08:00 - 09:00	2	12515	0.947	2	12515	0.084	2	12515	1.031
09:00 - 10:00	2	12515	0.979	2	12515	0.168	2	12515	1.147
10:00 - 11:00	2	12515	0.204	2	12515	0.164	2	12515	0.368
11:00 - 12:00	2	12515	0.224	2	12515	0.220	2	12515	0.444
12:00 - 13:00	2	12515	0.264	2	12515	0.336	2	12515	0.600
13:00 - 14:00	2	12515	0.276	2	12515	0.204	2	12515	0.480
14:00 - 15:00	2	12515	0.160	2	12515	0.344	2	12515	0.504
15:00 - 16:00	2	12515	0.196	2	12515	0.535	2	12515	0.731
16:00 - 17:00	2	12515	0.068	2	12515	0.551	2	12515	0.619
17:00 - 18:00	2	12515	0.324	2	12515	0.571	2	12515	0.895
18:00 - 19:00	2	12515	0.304	2	12515	0.308	2	12515	0.612
19:00 - 20:00	2	12515	0.140	2	12515	0.507	2	12515	0.647
20:00 - 21:00	2	12515	0.060	2	12515	0.184	2	12515	0.244
21:00 - 22:00	2	12515	0.028	2	12515	0.164	2	12515	0.192
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.390			4.372			8.762

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.

Waterman Boreham Regent House Brentwood

Licence No: 701701

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL LGVS

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 - 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	2	12515	0.020	2	12515	0.008	2	12515	0.028
08:00 - 09:00	2	12515	0.024	2	12515	0.012	2	12515	0.036
09:00 - 10:00	2	12515	0.028	2	12515	0.016	2	12515	0.044
10:00 - 11:00	2	12515	0.028	2	12515	0.024	2	12515	0.052
11:00 - 12:00	2	12515	0.036	2	12515	0.040	2	12515	0.076
12:00 - 13:00	2	12515	0.032	2	12515	0.032	2	12515	0.064
13:00 - 14:00	2	12515	0.016	2	12515	0.020	2	12515	0.036
14:00 - 15:00	2	12515	0.008	2	12515	0.024	2	12515	0.032
15:00 - 16:00	2	12515	0.020	2	12515	0.024	2	12515	0.044
16:00 - 17:00	2	12515	0.012	2	12515	0.012	2	12515	0.024
17:00 - 18:00	2	12515	0.012	2	12515	0.016	2	12515	0.028
18:00 - 19:00	2	12515	0.012	2	12515	0.008	2	12515	0.020
19:00 - 20:00	2	12515	0.004	2	12515	0.008	2	12515	0.012
20:00 - 21:00	2	12515	0.000	2	12515	0.004	2	12515	0.004
21:00 - 22:00	2	12515	0.000	2	12515	0.000	2	12515	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.252				0.248	0.500	

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.

UK and Ireland Office Locations

