



Travel Plan

Glossop Fire Station

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Prepared For: Derbyshire Fire & Rescue Service

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1. INTRODUCTION

Introduction

- 1.1 TPS Transport Consultants Ltd (TPS) has been commissioned by DYSE Structural Engineers, on behalf of Derbyshire Fire & Rescue Service, to prepare this Travel Plan in support of a new fire station at Charlestown Road, Glossop. Currently, a fire station already operates on the site, development proposals include the demolition of this existing fire station.

Site Location and Development Proposals

- 1.2 The location of the development is shown in **Figure 1.1**. **Appendix A** includes a layout plan for the development.

Figure 1.1 – Site Location



- 1.3 The site is located approximately 900m south of Glossop town centre. Access to the site is currently taken from Charlestown Road, in the northwest corner of the development, with the proposals maintaining this access arrangement. Plans include a total of 16 parking bays, 2 of which will be disabled bays and 4 of which will have electric vehicle charging points.



Context

- 1.4 Once completed, it is expected that the fire station will be the base of around 26 employees with a maximum of 8 people in at any one point throughout normal operation. In some circumstances, for example if a call requires on-call staff to attend, then this maximum may increase to 13 people, before and after the call.
- 1.5 Outside the hours of 8am to 7pm the station is unmanned, with fire cover provided by an on-call team of people. Should they be called in overnight, their only suitable method of travel to the station would be via car, with a requirement for them to be within a 5-minute attendance time of the station. The measures contained within this Travel Plan do not target these journeys made to the station. Instead, the Travel Plan seeks to influence the modes of travel used by staff commuting for a regular shift or weekly training.
- 1.6 Whilst the production of a Travel Plan is not a planning requirement, this document contributes towards the BREEAM credentials of the new fire station (in accordance with the 2018 BREEAM UK guidance), identifying specific infrastructure that will be provided alongside the 'soft' measures to be implemented by Derbyshire Fire & Rescue Service in order to achieve BREEAM credits under sections Tra-01 and Tra-02.
- 1.7 TPS is a specialist Travel Plan consultancy with extensive experience of developing and implementing Travel Plans throughout the UK. The content of the Travel Plan and the specific measures proposed, therefore pays due regard to relevant BREEAM guidance and the experiences of TPS in delivery Travel Plans at developments across the UK.
- 1.8 Specifically, this Travel Plan gives consideration to the guidance provided in Chapter 7 of the Manual, in particular TRA01 which relates to Transport Assessments and Travel Plans and TRA02, which relates to Sustainable Transport Measures. In total, TRA01 and TRA02 can achieve up to 12 credits.

The Travel Plan Vision

- 1.9 The aims of this Travel Plan reflect the aims for TRA01 and TRA02 of the BREEAM Technical Manual; these can be summarised as follows:
 - TRA01 – *"To reward awareness of existing local transport infrastructure and identify improvements to make it more sustainable"; and*
 - TRA02 – *"To maximise the potential for local, public, private and active transport through the provision of sustainable transport measures appropriate to the site".*



- 1.10 The aims above have been reflected in the measures proposed for the building. Further discussion of the aims, objectives and measures proposed within this Travel Plan, in accordance with the guidance outlined by BREEAM, is provided in **Section 6**.

Travel Plan Aims and Objectives

- 1.11 To achieve this vision, the aims of this document are to:
- Maximise the attractiveness of the site by highlighting the accessibility of the site via a range of travel options; and
 - Minimise the impact the development has upon the environment and local highway network by promoting the use of sustainable travel options above less sustainable modes.
- 1.12 Reflecting these aims, the objectives of this Travel Plan document are to:
- Determine the range of travel options available to employees and visitors;
 - Maximise the use of sustainable travel modes amongst employees through effective promotion and engagement; and
 - Use suitable monitoring and reporting mechanisms to assess, over time, the impact of the measures within this Travel Plan report.

Report Format

- 1.13 Following this introductory section, this document outlines the principles and strategic benefits of effective travel planning, then explores the nature of the transport infrastructure surrounding the development, before going on to highlight the facilities to be provided and Travel Plan measures to be implemented at this site. The report then sets out targets for a reduction in single occupancy car trips and a monitoring methodology to complement this. Finally, a section is included summarising the BREEAM Transport compliance and associated measures, to increase sustainable transport use.
- 1.14 Effective Travel Plans are those that contain a range of specific measures, targeted at the demographic of a site and backed up by a communications strategy that ensures people are made aware of the range of opportunities available to them. This document outlines both the measures to be implemented by Derbyshire Fire & Rescue Service and also discusses the way in which travel by each mode of transport will be supported and encouraged through promotion of existing opportunities.

2. DEVELOPMENT ACCESSIBILITY

Introduction

- 2.1 This section will outline the range of travel options that will be available to employees on the site, beginning with active travel modes before summarising public transport options. A brief overview of key services and destinations accessible by each mode is also given.

Active Travel Options

Access for Pedestrians

- 2.2 Walking is recognised as the most important mode of travel at a local level, and it offers the greatest potential to replace short car trips. The Institution for Highways and Transportation (IHT) offers guidance on walking distance by journey purpose and this is summarised in **Table 2.1** below.

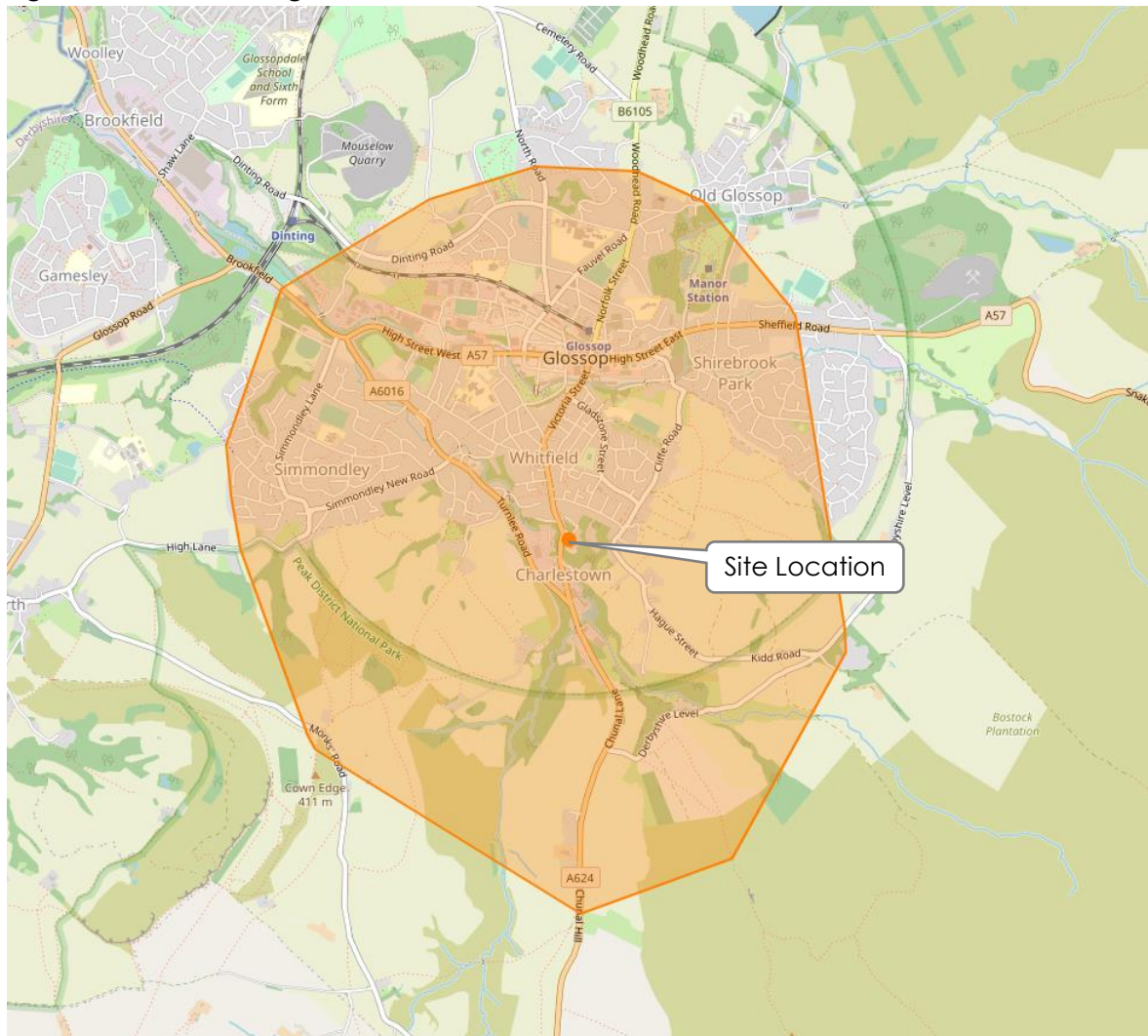
Table 2.1: Walking distances by Journey Type

Criteria	Town Centres	Commuting / School	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1000m	800m
Preferred Maximum	800m	2000m	1200m

(Source: IHT)

- 2.3 As can be seen in **Table 2.1**, the preferred maximum distance for Commuting / Education is 2000m. A 2000m catchment from the site includes a number of residential areas, including the majority of Simmondley, Shirebrook Park and all of Whitfield. This catchment also includes the centre of Glossop and Glossop train station. Overleaf, in **Figure 2.1**, the 2km walking catchment from the entrance to the site can be seen.
- 2.4 Pedestrian access will be taken via an internal footway off the vehicle egress point, from Charlestown Road. Footways run along both sides of Charlestown Road, to both the north and south of the development. Approximately 350m north of the development on Charlestown Road there is a pelican crossing, which includes tactile paving and dropped kerbs. Beyond this, there are no other controlled crossing points until reaching the centre of Glossop, where ample pedestrian crossings are available, many with facilities to aid the movement of the visually impaired and those with mobility issues.

Figure 2.1: 2km Walking Catchment

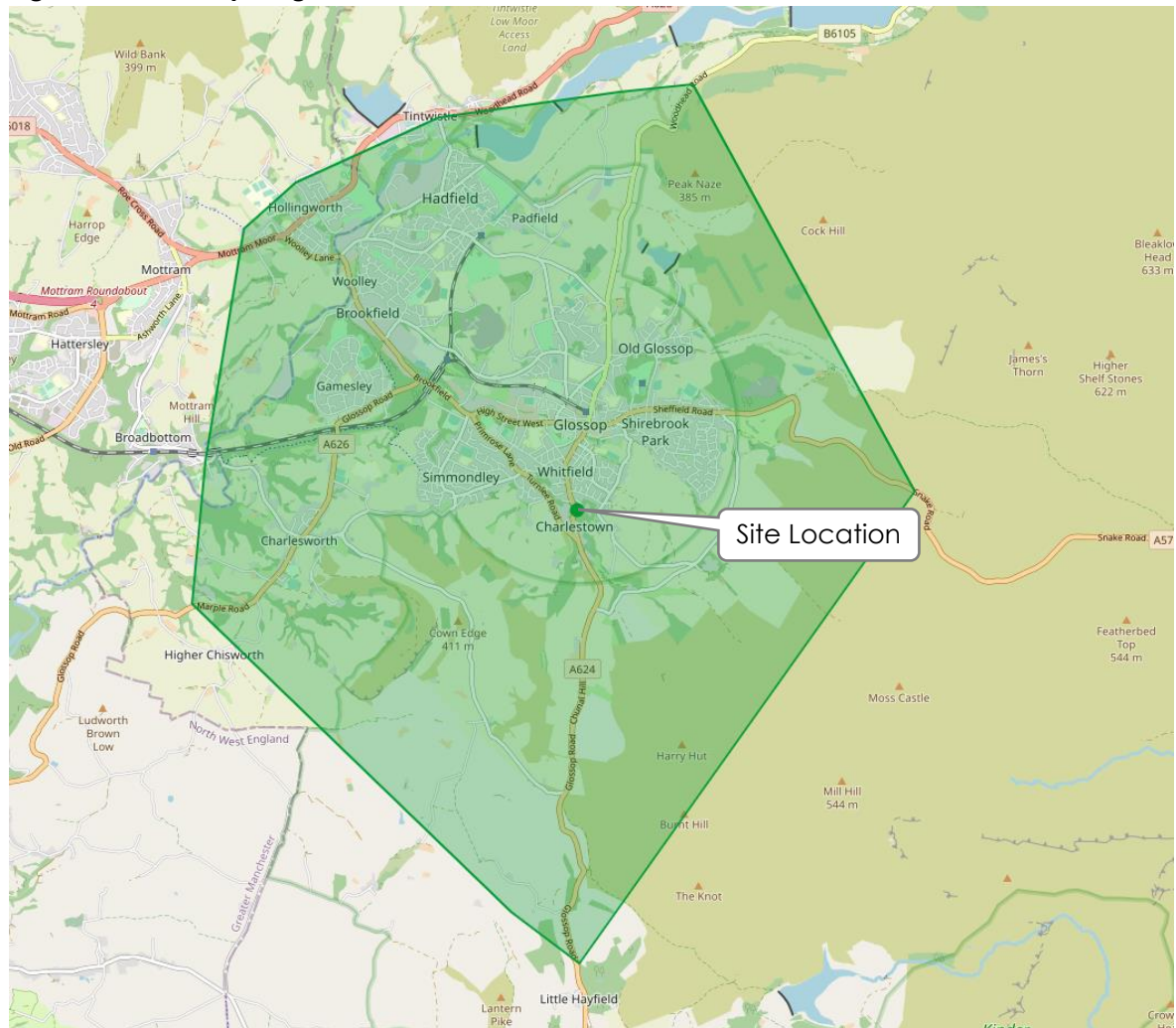


(Source: Open Street Maps)

Cycle Access

- 2.5 Five kilometres is typically considered to be a distance which people can realistically be expected to cycle, with relevant guidance stating that *"cycling also has the potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport"*.
- 2.6 A 5km cycling catchment from the site includes the entirety of Glossop and many of the surrounding areas including Hadfield, Brookfield and Gamesley. This cycle catchment can be seen in **Figure 2.2**, overleaf.
- 2.7 This 5km cycling catchment covers many of the local residential areas. It is considered that those living locally in the areas illustrated, would be able to access the site by bike.

Figure 2.2: 5km Cycling Catchment



- 2.8 Although there is no formal cycling infrastructure in the surrounding area, the majority of the local roads are low speed, with many being residential in nature too. The junction of the A624 (Charlestown Road) and the A57 in the centre of Glossop caters for cyclists with advanced stop lines on each of the arms.

Public Transport

Bus Services

- 2.9 The closest bus stops to the site are on Charlestown Road, circa 100m to the south of the entrance to the development. Further stops are available to the north of the site, still on Charlestown Road, as well as on Whitfield Avenue. These stops give access to an additional service. **Figure 2.3**, overleaf, shows the location of nearby bus stops.

Figure 2.3: Bus Stops



- 2.10 Stops along Charlestown Road are served by the 61 bus service, which is operated by High Peak Buses. This service operates between Glossop and Buxton, via Hayfield, New Mills and Whaley Bridge. There is approximately one service every hour, in either direction, between 6am and 7pm Monday to Friday, on Saturdays the service runs between 8am and 6pm once every 90 minutes. Sunday services will soon be withdrawn. It typically takes just under an hour to reach Buxton on this service. At the time of writing, there are works taking place which have closed a road along the route of this service and as a result, the bus is temporarily operating at a 90-minute frequency through the week, rather than the usual 60-minute. It is expected that the 60-minute frequency will return once works have finished.
- 2.11 The stops on Charlestown Road, to the north of the site, and the stops on Whitfield Avenue give access to the 390 service, also operated by High Peak Buses. This service operates on a somewhat circular route of Glossop, between the bus terminus on Hope Street in Old Glossop and Highfield Road in Whitfield, with key stops at Glossop train station and high



street. There's a service every 30 minutes, in either direction, Monday to Saturday between the hours of approximately 7am and 5pm, with no Sunday service.

Rail Services

- 2.12 The closest rail station is Glossop, approximately 1km away from the development. The station can be reached in 14 minutes on foot, 4 minutes by bike or around 6 minutes by bus. Generally, services run to both Manchester Piccadilly and Hadfield every 30 minutes, with more frequent services to/from Manchester in the peak periods. It takes 33 minutes to reach Manchester Piccadilly from Glossop station, on a service which stops at all of the local stations on the way. This makes commuting by train an attractive prospect for any employees living in the centre of Manchester, or in the outer areas of Manchester located on this train route.
- 2.13 At Glossop station there are cycle parking spaces available which are covered by CCTV. A ticket office is available at the station and open 7 days per week. Car parking is also available at the station, at a cost of £3 per day. Step-free access is provided throughout the station.

Summary

- 2.14 Overall, it is considered that there is good sustainable transport infrastructure within the vicinity of the development site, with a range of opportunities for employees regularly travelling to the site to do so by sustainable modes.
- 2.15 Taking the above into account, this Travel Plan will focus principally on the promotion of existing opportunities and the Travel Plan Coordinator will work to support and encourage sustainable travel choices amongst employees – both at the point of occupation and on an ongoing basis.



3. TRAVEL PLAN MEASURES

Introduction

- 3.1 The key to a successful Travel Plan programme is to identify the most suitable modes of transport that are realistic and practical for employees of a site such as this to adopt, before making these modes as attractive as possible. There is no single solution to any one person's transport needs. Different people will respond to different measures, whilst some may not react to any. A range of Travel Plan measures are therefore proposed, which employees can pick and choose from when they like and as they consider appropriate.
- 3.2 The following section will first discuss Travel Plan management and coordination before highlighting the range of measure that will be delivered as part of this Travel Plan. The measures proposed are based upon the experiences of TPS in delivering travel plans at other similar workplaces across the country.

Travel Plan Management and Resources

- 3.3 It is recognised that an important element of the success of this Travel Plan will be the identification of a Travel Plan Coordinator (TPC). The TPC will have overall responsibility for the development, implementation and management of the Travel Plan Strategy at the site.
- 3.4 The TPC role will be fulfilled by a member of the Derbyshire Fire & Rescue Service team. Prior to the occupation of the new building a suitable person within the organisation will be identified to take on the role of TPC.
- 3.5 The responsibilities of the TPC will include (but not be limited to):
- Coordination and distribution of travel information and marketing materials;
 - Promoting local and national sustainable travel-related campaigns;
 - Engaging with employees on travel and transport related issues; and
 - Liaising with other interested parties, including the local authority (if applicable).

Travel Plan Marketing and Information Provision

- 3.6 The principal task of the TPC will be to ensure that the available travel options are effectively promoted to all employees at the development. This will primarily be achieved through a range of modern marketing techniques, which will ensure the full demographic of employees have easy access to relevant and up to date travel information.



Marketing Strategy 1: Sustainable Travel Guide

- 3.7 A sustainable travel guide will be prepared and made available to all employees to help ensure they are aware of the range of travel options available to them. This guide will also be distributed to new employees to try to influence travel behaviour before car-borne travel patterns are established.
- 3.8 This guide will contain, as a minimum, information and/or details of where to find further information on the following topics:
- Comprehensive, up-to-date, public transport information;
 - The location of local bus and rail stations;
 - Local cycle facilities and shops;
 - Facilities for cyclists at the site, including the location of cycle storage, showers, lockers etc;
 - The health benefits associated with walking and cycling;
 - The benefits associated with car sharing and how to find a car sharing partner; and
 - Details of any sustainable travel related discounts and offers available to employees.
- 3.9 The content of the travel guide will be reviewed regularly throughout the period of the Travel Plan being in place, and a re-print will be done, as required, to reflect any changes to local travel options.

Marketing Strategy 2: Establish and Maintain a Continued Process of Marketing

- 3.10 The TPC will ensure that information is available in a variety of alternative 'user friendly' formats, which are used on an ongoing basis to re-promote the alternatives to single occupancy car use and the benefits of those alternatives.
- 3.11 Mechanisms to do this will vary and are likely to change overtime, but could include:
- Emails direct to staff about forthcoming events and promotions;
 - Use of posters and/or digital displays to provide information on the travel initiatives and offers available;
 - Events such as cyclist breakfasts, car share events and travel road shows; and
 - Use of environmental initiatives and national sustainable travel events.

Marketing Strategy 3: Provide a Sustainable Travel Information Notice Board

- 3.12 A noticeboard will be provided within a visible area of the building for all staff. This noticeboard will be used to promote sustainable transport initiatives locally and provide up-



to-date travel information. The TPC will be responsible for monitoring this noticeboard to ensure all information is updated, where relevant.

Walking Specific Measures

Walking Strategy 1: Promote and encourage walking through the distribution or displaying of promotional material

- 3.13 Walking will be marketed through the communication channels outlined earlier. In particular, this marketing material will include promotion of the benefits of walking in terms of health, finances, environment etc. and information on appropriate local walking routes and journey planning tools.

Cycling Specific Measures

- 3.14 Cycling also has many benefits in terms of health, fitness, mental well-being and reliability. In periods of traffic congestion and over short distances cycling offers competitive journey times with motorised transport and has a minimal impact upon highway capacity and the environment, as compared with vehicular trips.

Cycle Strategy 1: Promote and encourage cycling by distributing or displaying promotional material, which outlines benefits

- 3.15 Cycling and its various benefits will be marketed through the communication channels outlined earlier. In particular, the marketing will include:
- The benefits of cycling (health, financial, environmental etc);
 - Promotion of local and national schemes such as Bike to Work Week;
 - Details of local bike shops and maintenance providers;
 - Promotion of any local events; and
 - Details of available cycle parking and shower/changing facilities at the development.

Cycling Strategy 2: Provision of secure cycling parking and suitable facilities

- 3.16 The development will include a secure cycle parking area comprising 6 spaces, which will be available to all staff. The level of provision and usage of the cycle parking will be regularly monitored to ensure demand does not exceed supply.
- 3.17 Furthermore, shower, locker, changing and drying facilities are available for staff at the site. These facilities are available for people cycling, walking or running to the site.



Public Transport Specific Measures

- 3.18 New employees at the site may initially be unaware of their public transport options. Through the provision of easy to use travel information, employees can be encouraged to use bus and train services. With this in mind, information on the public transport opportunities will be made available to occupiers via the range of communication channels identified earlier.
- 3.19 Furthermore, with a range of user friendly, easily accessible journey planning tools now available online, it is quick and simple to plan a journey, whether for commuting or leisure purposes.

Public Transport Strategy 1: Public Transport will be marketed as a sustainable and practical mode of transport

- 3.20 Travel by public transport will be marketed through the communication channels identified earlier, and in particular will include the following:
- Access to public transport journey planners, including the Traveline journey planner found at traveline.info;
 - Access to bus operator apps, which include real time bus tracking functions, timetable information and mobile payment options;
 - Access to relevant bus timetables and maps available on the operator websites;
 - Details of ticketing options, including savings available through purchasing season tickets.

Public Transport Strategy 2: Consider offering interest free loans for staff to purchase rail season tickets

- 3.21 The organisation will explore the possibility of offering staff interest free loans to purchase annual rail season tickets, given that the large upfront cost of an annual season ticket is something that often puts people off committing to the purchase. This possibility will also be explored as an offer for employees at this site.

Sustainable Car Use Measures

- 3.22 A number of trips may only be practically possible by car (such as long distance journeys, trips at night and journeys to locations inaccessible by active travel or public transport). Effective travel plans are not anti-car campaigns but rather are aimed at empowering people to make informed travel choices.



Sustainable Car Use Strategy 1: Promote car sharing

- 3.23 Car sharing is when two or more people share a journey by car and travel together. It allows people to take advantage of the benefits of using the car, whilst at the same time reduces the overall number of vehicle trips made, and subsequently the impact on the environment. On a personal level, car sharing allows individuals to significantly reduce the cost of travelling by car.
- 3.24 A great deal of car sharing is arranged informally; however, to assist employees that wish to make more formal arrangements to either offer or find a lift, the Liftshare car share scheme (liftshare.com/uk) will be promoted. The scheme will be promoted to both prospective and existing employees by the way of the aforementioned travel guide. On-going promotions and marketing will also promote car sharing to employees, with the potential for car sharing coffee mornings to allow staff members to find other people will to car share.

Sustainable Car Use Strategy 2: Promotion of electric and hybrid vehicles

- 3.25 From 2030 onwards, the sale of new petrol, diesel and hybrid cars will be banned in the UK. Electric vehicles are expected to make up the majority of new cars sold around five years before that point, however.
- 3.26 Not only is it important to encourage employees to use alternative forms of transport to car, it's also important to encourage them to make more sustainable choices when travelling by car. Given the changes to salary sacrifice and benefit in kind policy surrounding electric vehicles due in April 2020, it also makes financial sense to switch to electric.
- 3.27 The benefits of electric vehicles and finance options available will be promoted to employees through the travel guide and on-going marketing, along with further sources of information.

Sustainable Car Use Strategy 3: Provision of electric vehicle charging points

- 3.28 For employees, the ability to charge an electric vehicle at work during the day can be a deciding factor when considering the switch to electric. Electric vehicle charging points will therefore be provided at the site for staff to use. A total of 4 charging points will be provided at the site, representing 25% of the total number of staff parking bays available.



4. TARGETS, MONITORING AND REPORTING

Travel Plan Targets

- 4.1 Targets are essential to ensure that everyone involved in the Travel Plan process knows what needs to be done and to enable progress to be assessed. Targets should be SMART (see below) and can take the form of 'aim-type' targets and 'action-type' targets:

- Specific
- Measurable
- Achievable
- Realistic
- Time-bound

Action-type Targets

- 4.2 Action-type targets are non-quantifiable targets and take the form of actions that need to be achieved.
- 4.3 The action-type targets specific to this Travel Plan have been outlined in the action plan contained in **Appendix B**, which identifies key delivery timeframes and responsibilities.

Aim-type Targets

- 4.4 Aim-type targets are quantifiable targets against which the effectiveness of the Travel Plan in achieving its stated aims and objectives can be measured. In order to set aim-type targets it is first necessary to have 'baseline' data against which progress can be assessed.
- 4.5 In this instance, the likely baseline (i.e. without a Travel Plan) modal split has been taken from a travel survey of those currently working at the fire station. This survey was conducted in November 2021, a total of 16 responses were received, with the survey being distributed to a total of 27 people. This represents a response rate of 59.3%.
- 4.6 The survey asked people for their regular mode of travel, along with their postcode, typical arrival/departure time and questions about what might encourage them to use other modes of travel. The modal split observed in the survey can be seen in **Table 5.1**. Some other key factors learned in the survey are as follows:
- 68.8% of respondents (11 of 16) live within 2km of the site (approximated using postcode information);



- The average distance travelled by respondents to the site was 7.7km (approximated using postcode information);
- 56.2% of respondents (9 of 16) work varied shift patterns and therefore do not have a normal arrival or departure time;
- 14.3% of the people stated that their usual mode of travel was car alone; (2 of 14) stated that they occasionally cycle to work; and
- Of the measures that may encourage travel by bike, 'discounts on bike and e-bikes' was the most popular, with 3 of the 14 people not currently cycling suggesting this would encourage them to do so.

4.7 The target modal split for this site is calculated as a percentage reduction in the proportion of people travelling by car alone. In this instance an initial target has been set as a 10% reduction from the baseline survey to be achieved within 3 years of initial occupation of the new Fire Station development. This target is deemed a reasonable reduction for the delivery period of this Travel Plan. The initial target modal split, compared with the likely baseline modal split data, can be seen in **Table 5.2**.

Table 5.1 – Baseline Modal Split data from Survey

Method of Travel to Work	Count	Percentage Mode Share
Car, alone	14	87.5%
Car share	0	0%
Walk / run	2	12.5%
Cycle	0	0%
Public transport	0	0%
Other	0	0%

Table 5.2 – Modal split baseline (adapted from Table 5.1) and targets.

Method of Travel to Work	Baseline Mode Share	Initial Target Mode Share
Car alone	87.5%	78.75%
Car share	0%	21.25%
Public transport	0%	
Active travel	12.5%	
Other	0%	



- 4.8 There is, however, a need to monitor progress towards the targets over time (and not just at the three-year mark). Regular surveys will therefore be conducted throughout the Travel Plan period, allowing the TPC to easily determine progress at any given point by simply calculating the percentage modal split and comparing this with percentage target. Targets will be considered to be met if the percentage modal split for people travelling by car alone, calculated using survey results, is less than or equal to the target modal split listed above.

Travel Plan Monitoring

Monitoring and Review Strategy 1: Baseline Employee Travel Survey & Reporting

- 4.9 A travel survey will be conducted within the first 6 months of completion/occupation of the development, intended to validate the baseline situation (and thus the appropriateness of the targets). The survey will be promoted to staff at the site predominantly via direct email, from the Travel Plan Coordinator.
- 4.10 The results will then be summarised in a short report.

Monitoring and Review Strategy 2: Biennial Employee Travel Survey and Reporting

- 4.11 Following this baseline survey, monitoring of the Travel Plan's progress will take place via follow-up employee travel surveys at 18 months and 3 years after initial occupation of the development.
- 4.12 The results of these monitoring exercises will also be summarised in a short report.
- 4.13 Should it be found that at the end of the monitoring period, the targets within this Travel Plan are not being met, discussions will be had about the appropriateness of introducing further measures to encourage sustainable travel. If new measures are introduced, they may be different to the ones detailed within this Travel Plan and should relate to the local situation and individual site needs at that time.



5. BREEAM COMPLIANCE

Introduction

- 5.1 As previously mentioned, as opposed to simply being a planning requirement, this document contributes towards the BREEAM credentials of the in accordance with the 2018 UK BREEAM Guidance.
- 5.2 This development falls within the 'fully-fitted' BREEAM assessment type and therefore the transport category is weighted at 10% of the assessment. Transport is made up of two sections *Tra01 Transport Assessment and Travel Plan*, worth two credits, and *Tra02 Sustainable transport measures*, worth up to ten credits. An extract of the 2018 UK BREEAM Guidance, covering the relevant transport section referenced hereafter, can be found at **Appendix C**.

Tra01 Transport Assessment and Travel Plan

- 5.3 In this instance, the requirement for a Transport Assessment set out within assessment criteria 1 and many of the requirements set out in criteria 2 of section Tra01 are met by the accompanying Transport Assessment, which has been prepared by TPS Transport Consultants.
- 5.4 It is noted that in order to achieve the 2 credits available for Tra01, the site-specific Transport Assessment must cover the following criteria:
- Predicted travel patterns and transport impact of future building or site users;
 - Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors;
 - Reporting of the number and type of existing accessible amenities, within 500m of the site;
 - Disabled access accounting for varying levels and types of disability, including visual impairment;
 - Calculation of the existing public transport Accessibility Index (AI); and
 - Current facilities for cyclists.
- 5.5 Two parts of the above criteria have not yet been covered by this report (or the accompanying Transport Assessment) and are worth noting, these are:
- 2.d Reporting on the number and type of existing accessible amenities within 500m of the site; and

2.f Calculation of the existing public transport Accessibility Index (AI).

- 5.6 For ease when assessing against later criteria, **Table 6.1** lists the amenities applicable for Building Group 6 (other building types) along with whether they are within 500m of the site and whether they will be provided within the building.

Table 6.1 – Accessible Amenities at this site

Amenity	Existing with 500m?	Provided in the development?
Appropriate food outlet	N	N
Access to cash	N	N
Access to an outdoor open space (public or private, provided suitable sized and accessible to building users)	Y	N
Access to a recreation or leisure facilities for fitness or sports	N	Y – full gym facilities provided within the building for staff to use.
Publicly available postal facility	N	N
Community facility	Y	N
Over the counter services associated with a pharmacy	N	N
Public sector GP surgery or general medical centre	N	N
Child care facility or school	N	N

- 5.7 Using the BREEAM 2014 Public Transport Accessibility calculator tool this site received a current AI of 3.38. This score was achieved from the three compliant public transport nodes available to employees at the site. Two bus nodes are available within the required 650m of the site, providing access to two services, one with an hourly frequency and the other with a twice hourly frequency. The third node is Glossop rail station, at approximately 1km from the development, which provides 4 services per hour. An extract from the AI calculator tool can be found at **Appendix D**.



- 5.8 Assessment criteria 3, 4 and 5 of the Tra01 section are addressed by the preparation of this Travel Plan Report, specifically by providing a long-term management strategy to encourage sustainable travel, including details of the measures to be implemented prior to, during and after the completion of construction at the site. The final occupiers of the building, Derbyshire Fire & Rescue Service, are committed to the implementation of this Travel Plan, allowing the management strategy and measures within it to be tailored to meet the specific needs of the organisation. On this basis, the two possible TRA01 credits are achieved.

Tra02 Sustainable Transport Measures

- 5.9 A prerequisite for achieving credits in this section is to have achieved criteria 3-5 in the Tra01 Transport Assessment and Travel Plan section, which has been demonstrated above and throughout this report.
- 5.10 The credits from this section are then awarded based on a combination of the Accessibility Index of the development and the number of points achieved from the sustainable transport measures to be implemented there. Points are awarded based on a total of 11 assessment options, which can be seen in *Table 7.4* of the BREEAM Guidance, found at **Appendix C**. Each of these assessment options are addressed in turn below in **Table 6.2**, along with the number of points understood to have been achieved in each case.
- 5.11 As detailed in **Table 6.2** The development achieves 5 points from the sustainable transport measures to be implemented, prior to review of additional site-specific improvement measures detailed within this Travel Plan by BRE (assessment option 11).

Table 6.2 – Sustainable Transport Measures Assessment Options (from table 7.4 of BREEAM guidance)

Assessment Option	Points Achieved	Additional Information
1	0 / 1	-
2	0 / 3	-
3	0 / 1	-
4	1 / 1	As demonstrated in <i>Sustainable Car Use Strategy 4</i> , 25% of the staff car parking bays will provide electric vehicle charging at a minimum of 3kW.
5	0 / 1	Although car sharing will be promoted to employees at the development, no priority spaces will be provided for car sharers.
6	0 / 2	-



7	1 / 1	As detailed within <i>Cycle Strategy 2</i> , 6 compliant cycle storage spaces will be provided at the building. This is over the minimum of 3 for 26 total staff members expected at the site.
8	1 / 1	Also detailed in <i>Cycle Strategy 2</i> is the provision of cyclists' facilities within the building, it is planned to include compliant showers, changing facilities, lockers and a drying room.
9	0 / 1	As detailed in the Tra01 part of this section, there are less than 3 accessible amenities within 500m of the building.
10	2 / 3	Also detailed earlier in this section, the building will provide the following accessible amenities for employees: Full gym facilities
11	2 / 3	To be assessed by BRE

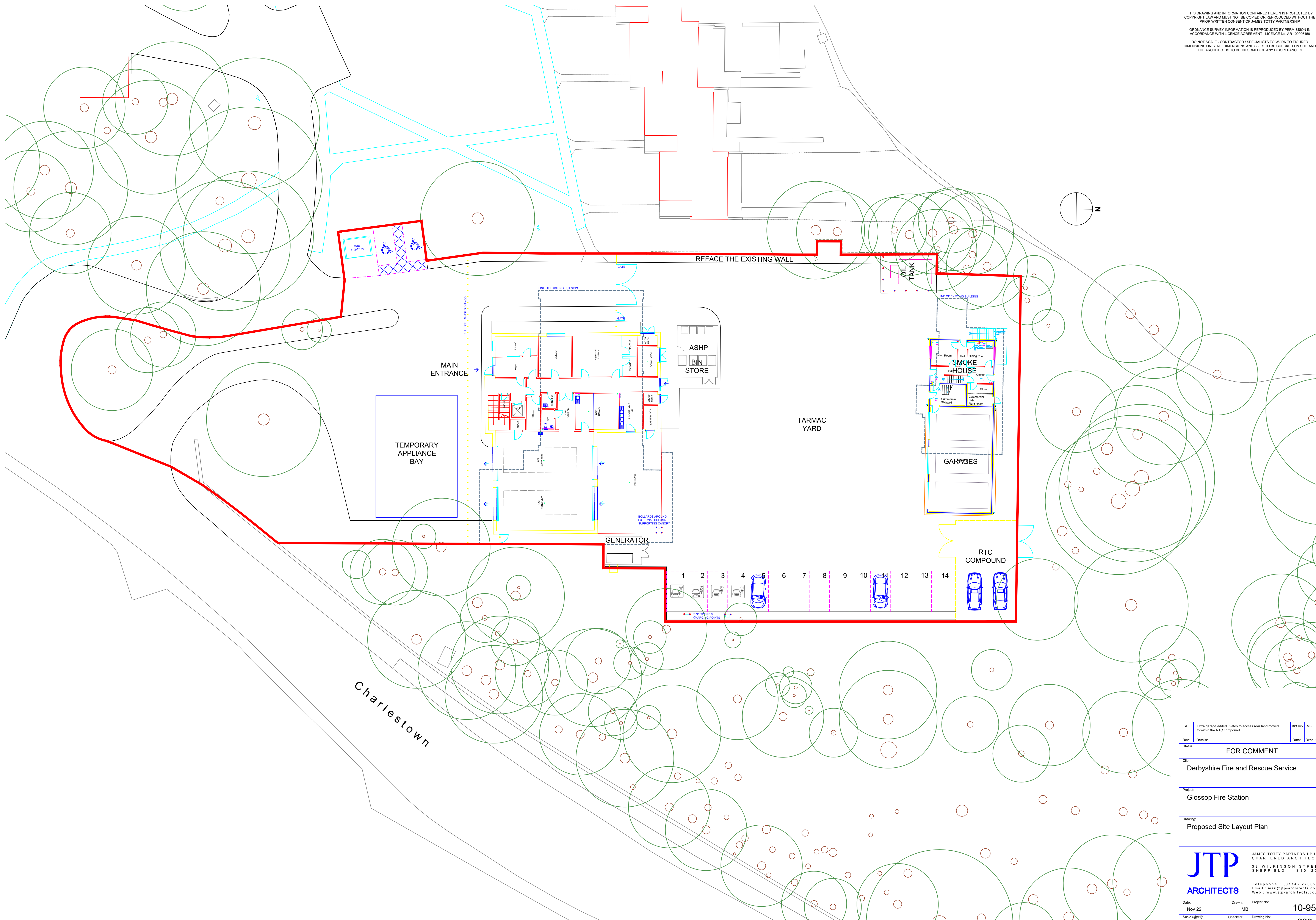
Summary

- 5.12 The above section has demonstrated how and where it is understood that this development and Travel Plan implementation strategy comply with the BREEAM Transport Guidance. It has been shown that this site has an Accessibility Index of 3.38, with ample opportunity for employees to travel to key nearby areas by public transport. Although accessible amenities available with 500m are limited, a range of amenities are available in Glossop centre, just slightly further afield.
- 5.13 It has also been demonstrated that the cyclists' facilities and EV charging provision to be provided by this development are beyond the minimum necessary to meet BREEAM standards. These factors, along with other 'soft' measures to be implemented at the site, including a high level of sustainable travel information provision, make it likely that employees will have a reduced reliance on private petrol and diesel vehicles for their commute. This will ultimately reduce the carbon footprint and associated negative environmental impacts of this development.



Appendix A

Site Layout Plan



A	Extra garage added. Gates to access rear land moved to within the RTC compound.	16/11/22	MB	GN
Rev:	Details:	Date:	Drn:	Chk:

Status: FOR COMMENT

Client: Derbyshire Fire and Rescue Service

Project: Glossop Fire Station

Drawing: Proposed Site Layout Plan

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Date:	Drawn:	Project No:	
Nov 22	MB	10-954	
Scale (B/A1):	Checked:	Drawing No:	
1:200	GN	200 A	



Appendix B

Action Plan

	Action	Responsibility	Target Delivery Date
Travel Plan Management	Identify Travel Plan Coordinator	DFRS	3-months prior to first site occupation
Travel Plan Marketing			
Marketing Strategy 1	Provision of a travel information guide	TPC	1-month prior to first site occupation
Marketing Strategy 2	Establish and Maintain a Continued Process of Marketing	TPC	Ongoing throughout delivery period
Marketing Strategy 3	Provision of up-to-date travel information on noticeboards in staff areas	TPC	Ongoing throughout delivery period
Walking Strategy			
Walking Strategy 1	Promote and encourage walking	TPC	Ongoing throughout delivery period
Cycling Strategy			
Cycling Strategy 1	Promote and encourage cycling	TPC	Ongoing throughout delivery period
Cycling Strategy 2	Provision of cycle parking facilities	DFRS	Through design
Public Transport Strategy			
Public Transport Strategy 1	Promote and encourage public transport use	TPC	Ongoing throughout delivery period
Public Transport Strategy 2	Consider offering interest free loans for staff to purchase rail season tickets	DFRS and TPC	Ongoing throughout delivery period
Sustainable Car Use			
Sustainable Car Use Strategy 1	Promote Car Sharing	TPC	Ongoing throughout delivery period

Sustainable Car Use Strategy 2	Promotion of electric and hybrid vehicles	TPC	Ongoing throughout delivery period
Sustainable Car Use Strategy 3	Provision of electric vehicle charging points	DFRS	Through design
'Monitoring and Review Strategy'			
Monitoring Strategy 1	Baseline Employee Travel Survey & Monitoring Report	TPC	Within 6 months of first site occupation
Monitoring Strategy 2	Biennial Employee Travel Survey and Reporting	TPC	Follow-up surveys at 18 months and 3 years



Appendix C

Extract from 2018 BREEAM UK Guidance Document

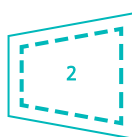
Tra 01 Transport assessment and travel plan



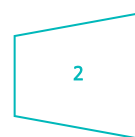
Fully fitted



Simple building



Shell & core



Shell only



No minimum standards

Aim

To reward awareness of existing local transport and identify improvements to make it more sustainable.



Value

- Promote the development of an initial transport assessment for the site.
- Promote the implementation of travel solutions that are relevant to the challenges and opportunities of a specific site.
- Raise awareness, understanding and accessibility of travel options, and local amenities, allowing for affordable access to services.
- Encourage more sustainable transport and movement of people and goods, to and around the site.
- Encourage designers to account for the travel needs of future occupants, thereby allowing for better management in operation.
- Reduce congestion and improve safety on the site and local roads.
- Increase attractiveness of the site to potential users.



Context

The National Planning Practice Guidance indicates that travel plans should be considered in parallel to development proposals and that they should be integrated into the design of a new site.

Based on evidence of the anticipated transport impacts of new developments, Travel Plans are a long term management strategy for implementing the mitigating measures addressed by the Transport Assessments or Statements⁽¹⁴²⁾.

They intend to promote sustainable and active travel. Their purpose is to deliver transport and transport-related benefits to the development itself and the wider community. As they include a package of actions designed to address the needs of the users in that local area, effective but unpopular solutions, such as parking restrictions, can be combined with popular but expensive solutions, such as bus subsidies, to ensure that the negative impacts are neutralised by the benefits.

The transport tools proposed by the Travel Plan are user-focused and ensure the increase and improvement of travel choices to the users, cost savings and improved company image and staff health and wellbeing.



Assessment scope

	Fully fitted	Simple building	Shell and core	Shell only
Applicable Assessment criteria	All	All	All	All
Assessment type specific notes	None	None	None	None



Specific notes

Assessment type specific	
None	

Building type specific	
None	

Assessment criteria

Two credits – Transport assessment and Travel plan

- 1 No later than Concept Design stage, undertake a site-specific transport assessment (or develop a travel statement) and draft travel plan, which can demonstrably be used to influence the site layout and built form; see Methodology.
- 2 The site-specific travel assessment (or statement) shall cover as a minimum:
 - 2.a If relevant, travel patterns and attitudes of existing building or site users towards cycling, walking and public transport, to identify relevant constraints and opportunities.
 - 2.b Predicted travel patterns and transport impact of future building or site users.
 - 2.c Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors.
 - 2.d Reporting of the number and type of existing accessible amenities, see Table 7.1 below, within 500m of the site.
 - 2.e Disabled access accounting for varying levels and types of disability, including visual impairment.
 - 2.f Calculation of the existing public transport Accessibility Index (AI), see Methodology on the facing page.
 - 2.g Current facilities for cyclists.
- 3 Following a transport assessment (in accordance with the requirements set out in criteria 2), develop a site-specific travel plan that provides a long term management strategy which encourages more sustainable travel. The travel plan includes measures to increase or improve more sustainable modes of transport and movement of people and goods during the building's operation see Methodology.
- 4 If the occupier is known, involve them in the development of the travel plan.
- 5 Demonstrate that the travel plan will be implemented and supported by the building's management in operation.

Table 7.1 Amenities in proximity to the site

Amenities
Appropriate food outlet
Access to cash
Access to an outdoor open space (public or private, suitably sized and accessible to building users)
Access to a recreation or leisure facility for fitness or sports
Publicly available postal facility
Community facility
Over the counter services associated with a pharmacy
Public sector GP surgery or general medical centre
Childcare facility or school

Table 7.2 Default hours of operation by building type for a typical day

Building type	Default hours
Commercial	08.00–19.00
Preschool, school, sixth form college	07.30–10.00, 15.00–17.30
Further and Higher Education	08.00–19.00
Healthcare	07.00–20.00 (encompassing visiting hours and the typical daytime shift pattern)
Retail: Shopping centre	09.00–19.00
Retail: Supermarket	08.00–22.00
Retail: Service provider	08.00–18.00
Retail: Convenience store	07.00–22.00
Retail: DIY or retail park	08.00–20.00
Retail: shop	08.30–17.30
Multi-residential accommodation	08.00–19.00
Court	08.00–19.00
Prison	07.00–20.00 (encompassing visiting hours and the typical daytime shift pattern)
Other buildings	08.00–19.00 Or use any of the above hours, as appropriate to the building type.
24 hour use building	07.00–20.00



Methodology

Transport assessment or statement

A transport assessment is required where a proposed development is likely to have transport and related environmental impacts. The study area for a transport assessment should be determined in discussions between the developer and appropriate authorities.

A transport statement is required if the proposed development is unlikely to have a significant impact on local transport networks or related environmental impacts. A transport statement can demonstrate compliance with BREEAM if relatively low numbers of trips or traffic flows, with minor transport impacts, are expected from the proposed development.

For further guidance refer to www.gov.uk/government/publications/guidance-on-transport-assessment.

Calculation of the public transport Accessibility Index (AI)

1. Collate the following information to determine the public transport Accessibility Index (AI) of the assessed building:
 - a. Distance (m) from the main building entrance to each compliant public transport node
 - b. Public transport types serving the compliant node, e.g. bus or rail
 - c. Average number of services stopping per hour at each compliant node during the operating hours of the building for a typical day (see Table 7.2 above).
2. Use the BREEAM Accessibility Index tool to calculate the AI.

Calculating the average number of services

For the AI calculation, the frequency of public transport is the average number of services per hour. This average is calculated by determining the number of services stopping at the node (during the peak arrival and departure times for the building or the building's typical day's operating hours, see definition of 'operating hours') divided by the number of hours within that period. For example, the average number of services for a building that operates between 08.00–19.00 hrs (11 hours) within proximity of a bus stop with 35 stopping services during this period is 3.2 (equivalent to an average service frequency of approximately 20 minutes).

Multiple services

Services that operate from more than one node within proximity of the building, the same bus serving two separate bus stops, must be considered only once, at the node in closest proximity to the building. Different services at the same node count as separate services.

Bi-directional routes

Routes will be bi-directional; however, for the purpose of calculating the index, consider only the direction with the highest frequency (in accordance with the PTAL methodology).

Campus or campus-style developments - entrance to consider when calculating the AI

The main entrance, (see Definitions on the facing page) to the campus, e.g. further or higher education sites, can be used to determine the distance to a compliant node if 80% or more of the buildings are within 1000m of this entrance.

If the site has more than one main entrance, either entrance can be used for the calculation.

Where less than 80% of the buildings are within 1000m of the campus' main entrance, the assessed building's main entrance must be used to determine the distance to a compliant node. This aims to encourage the location of public transport nodes inside or on the periphery of large campuses.

Buildings in Greater London

The transport for London Planning Information Database allows users to search for a specific London location by street name, coordinates or postcode and then calculate the Accessibility Index (AI) for that location. The Total AI is confirmed for the Point of Interest (POI) within the summary report, which can be downloaded and used as evidence of compliance for the assessed building. See tfl.gov.uk.

Operating hours in a typical day

A typical day represents the period when travel to and from the building by its users and visitors will be at its highest. For most buildings this should be taken as a mid-week day. In choosing a typical day the assessor should check that timetabled information for that day is, within reason, representative of the public transport provision for the entire operating week (excluding Sundays).

BREEAM considers a building's accessibility to be defined by how readily the public transport network can be used by the majority of building users travelling to and from the building. In most cases the normal operating hours of the building can be used. Where shift patterns see the majority of building users (over 80%) arriving or leaving during a certain period, for example an office building where the majority of office workers arrive between 8.00–10.00, that period can be used as an alternative to the operating hours of the building. This accounts for some building types that operate a 24-hour day and on a shift work basis. During typically deemed unsociable hours, where there is little if any public transport operating, such periods do not need to be accounted for in the assessment of this issue. Where the assessed building operates on a 24-hour basis or the operating hours are unknown at the time of assessment, use Table 7.2 on the previous page.

Travel plan measures

As a minimum, the following measures shall be considered when developing the travel plan:

- Negotiation with local bus, train or tram companies an increase in the local service provision for the development (see Tra 02 Sustainable transport measures: option 2)
- Provision of a public transport information system in a publicly accessible area (see Tra 02 Sustainable transport measures: option 3)
- Provision of electric recharging stations (see Tra 02 Sustainable transport measures: option 4)
- Provision of parking priority spaces for car sharers (see Tra 02 Sustainable transport measures: option 5)
- Consultation with the local authority on the state of the local cycling network and on improvements (see Tra 02 Sustainable transport measures: option 6)
- Provision of dedicated and convenient cycle storage (see Tra 02 Sustainable transport measures: option 7)
- Provision of cyclists' facilities (see Tra 02 Sustainable transport measures: option 8)
- Lighting, landscaping and shelter to create pleasant pedestrian and public transport waiting areas
- Restrictions or charging for car parking
- Pedestrian and cyclist friendly (for all types of user regardless of the level of mobility or visual impairment) with the provision of cycle lanes, safe crossing points, direct routes, appropriate tactile surfaces, good lighting and signposting to other amenities, public transport nodes and adjoining off-site pedestrian and cycle routes
- Provision of suitable taxi drop-off or waiting areas

- Ensure rural buildings have appropriate access to transport to serve the local community adequately (where procured to do so, e.g. community centre).



Evidence

Criteria	Interim design stage	Final post-construction stage
All	One or more of the appropriate evidence types listed in The BREEAM evidential requirements on page 29 can be used to demonstrate compliance with these criteria	



Definitions

Accessibility Index (AI)

An indicator of the accessibility and density of the public transport network at a point of interest (the BREEAM-assessed building). The index is influenced by the proximity and diversity of the public transport network and the frequency of services at the accessible nodes. The greater the number of compliant nodes, services and their proximity to the building, the higher the AI.

The methodology for calculating the AI uses transport for London's Public Transport Accessibility Level (PTAL) method, itself based on a methodology developed in 1992 by the London Borough of Hammersmith and Fulham. For a detailed description of the PTAL methodology see transport for London's 'Assessing transport connectivity in London' guidance document published in 2015.

Accessible amenities

Amenities (as listed) that are accessible via safe pedestrian routes, e.g. pavements, paths and safe crossing points or, where provided, dedicated pedestrian crossing points. The distance should not be measured in a straight line 'as the crow flies', but along the actual route.

Appropriate food outlet

Access to a food supply that is affordable to the majority of the building users as well as being appropriate for their day-to-day needs. For example, a small office building with a small shop selling sandwiches or snacks, or a multi-residential building with a restaurant in the local area.

Building users

This refers, as appropriate to building type, to the following:

1. Staff (commuter journeys and business travel)
2. Pupils and students
3. Visitors
4. Patients
5. Customers
6. Community users
7. Personnel who make deliveries and collections to and from the development
8. Contractors or service providers, who regularly work at and access the building or development
9. Residents of multi-residential buildings.

BREEAM Tra 01 Calculator tool

A spreadsheet-based calculator used to determine the AI for the assessed building.

Childcare or school

To provide child support for potential building users. For example, a nursery, childminding facilities or a school local to the development.

Community facility

An internal space that will facilitate community activities for the assessed building and its users. For example, for a multi-residential building this could be a community hall or, for an office building, a public house.

Compliant transport node

A compliant node includes any bus service with a stop within 650m and any railway station within 1000m of the assessed building's main entrance, measured via a safe pedestrian route (not 'as the crow flies'), but along the actual route. The service stopping at each node must provide transport from, or onward travel to, either an urban centre, major transport node or a community focal point, e.g. doctor's surgery, library, school or village centre. Only local services should be assessed and any national public transport services should be excluded from the analysis, unless such a service can be said to provide a local commuter service. Prisons and MOD sites: The distance requirement for a compliant node for buildings on these sites is 1000m for both bus and rail.

Main building entrance

The main building entrance is the entrance to the assessed building which is directly connected to the main building reception, circulation routes, lifts or stairs, and is available to the majority of the building's staff and visitors on arrival. It is not the site entrance (unless the site entrance is also the building entrance, e.g. building with a boundary on a public highway). For prison or MOD site assessments, the main entrance should be taken as the gatehouse entrance.

Outdoor open space (public or private, suitably sized and accessible to building users)

A space that enables building users to take a break from internal building activities. For example, an office building with space to sit outside for lunch. The space must be suitably sized for the building users associated with the project and not form part of the public highway.

Recreation or leisure facility

A facility that allows building users to exercise and maintain a healthy lifestyle. For example, a local leisure centre, tennis courts, on-site gym or, for a school, a local playground.

Rural location

A rural location is defined in this context as a site clearly not within or on the boundary of a small, medium or large urban cover. An urban cover will have a population of 3000 people or more, located within a tract of continuously built-up urban land extending 20 hectares or more. The definition of rural includes village locations, green field sites or small urban centres with a population of less than 3000 people within a tract of land no greater than 20 hectares. Such locations will most likely be on a local bus route to larger urban areas or other local towns and may have local shops and other facilities. This classification is based on the Department of Transport National Travel Survey definition, which specifies urban areas based on the extent of urban development indicated on Ordnance Survey maps.

Rural location-sensitive buildings

This definition includes any of the building types with a demonstrable social or economic need from a rural population for the service provided by the new building, such that it is not feasible to locate it at an alternative site. Examples of building types that may fall into this category:

1. Offices where providing services to the local community
2. Industrial where providing services to the local community
3. Retail where providing services to the local community
4. Preschool, primary and secondary school
5. GP surgery.

Travel plan

A travel plan is a strategy for managing all travel and transport within an organisation. It contains both physical and behavioural measures aimed at increasing travel choices, through the use of sustainable modes of transport to a site or development.

Additional information

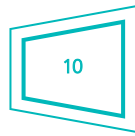
None.



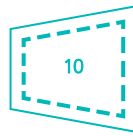
Tra 02 Sustainable transport measures



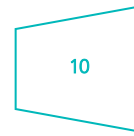
Fully fitted



Simple building



Shell & core



Shell only



No minimum standards

Aim

To maximise the potential for local public, private and active transport through provision of sustainable transport measures appropriate to the site.



Value

- Encourage improvement of public transport provision.
- Reduce building users' carbon footprint and associated negative environmental impacts, improving local air quality and reducing local congestion.
- Encourage reliance on active travel and engagement with local authorities.
- Promote provision of electric car recharging stations and reduced reliance on cars.
- Increase provision of local amenities.



Context

Cities around the world are actively looking at ways of improving quality of life, air quality, congestion, etc. The use of private cars is a key area that is being looked at. This is resulting in the consideration of increasingly stringent controls of private car use and the dependency on them.

Transport accounts for around a quarter of UK greenhouse gas emissions, significantly affecting air quality at the roadside⁽¹⁴³⁾. Public transport offers a route to addressing transport-related greenhouse gas emissions. The emissions from trains and buses can be up to eight times lower than car travel.

The National Planning Policy Framework places significant emphasis on sustainable transport options, stating that planning should “make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable”.

Air pollution is estimated to cause 29,000 deaths each year and reduces life expectancy by 6 months on average in the UK, at a cost of £16 billion per year⁽¹⁴⁴⁾. It also damages plants and animals, affecting biodiversity and crop yields.

By reducing air pollution levels, the burden of disease from stroke, heart disease, lung cancer and both chronic and acute respiratory diseases, including asthma, can be lessened.

While the role of strategic policies is key, the need to address these issues with careful planning and design remains key to the creation of urban environments that are healthier and more pleasant to live.



Assessment scope

	Fully fitted	Simple building	Shell and core	Shell only
Applicable Assessment criteria	All	All	All	All
Assessment type specific notes	None	None	None	None



Specific notes

Assessment type specific	
None	

Building type specific	
None	



Assessment criteria

Prerequisite

- 1 Achieve criteria 3-5 in the Tra 01 Transport assessment and travel plan on page 179 credit.

10 credits – Transport options implementation

- 2 Identify the sustainable transport measures, see Table 7.4 below.
- 3 Award credits according to the existing Accessible Index (AI) of the project, and the total number of points achieved for the options implemented, see Table 7.3 below.

Table 7.3 Credits available relating to the AI of the site and the number of points achieved

AI < 25 points	AI ≥ 25 & < 40 (urban centre) points	AI of ≥ 40 points	Credits
1	1		1
2		1	2
3	2		3
4		2	4
5	3		5
6	4	3	6
7	5		7
8	6	4	8
9	7	5	9
10	8	6	10

Table 7.4 Sustainable public, private and active transport measures

Sustainable transport measures			
Assessment option	Public transport measures	Applicable building types	Points
1	1. The existing AI calculated in Tra 01 achieves the following: ≥ 4 for prison or MOD sites, rural location sensitive buildings, and other building group 3 ≥ 8 for all other building types	All	1
2	2. Demonstrate an increase over the existing Accessibility Index through negotiation with local bus, train or tram	All	2

Sustainable transport measures			
	companies to increase the frequency of the local service provision for the development;		
	OR		
	3. Demonstrate an increase over the existing Accessibility Index. This could be through provision of a diverted bus route, a new or enhanced bus stop, or other similar solutions.		3
	OR		
	4. Provide a dedicated service, such as a bus route or service (See Definitions).		3
3	5. Provide a public transport information system in a publicly accessible area, to allow building users access to up-to-date information on the available public transport and transport infrastructure. This may include signposting to public transport, cycling, walking infrastructure or local amenities.	All	1
Assessment option	Private transport measures	Applicable building types	Points
4	6. Provide electric recharging stations of a minimum of 3kW for at least 10% of the total car parking capacity for the development.	All	1
5	7. Set up a car sharing group or facility to facilitate and encourage building users to car share. 8. Raise awareness of the sharing scheme with marketing and communication materials. 9. Provide priority spaces for car sharers for at least 5% of the total car parking capacity for the development. 10. Locate priority parking spaces nearest the development entrance used by the sharing scheme participants.	All	1
Assessment option	Active travel measures	Applicable building types	Points
6	11. During preparation of the brief, the design team consults with the local authority (LA) on the state of the local cycling network and public accessible pedestrian routes, to focus on whichever the LA deems most relevant to the project, and how to improve it. 12. Agree and implement one proposition chosen with the local authority. The proposition supported by the development is additional to existing local plans and has a significant impact on the local cycling network or on pedestrian routes open to the public.	All	2
7	13. Install compliant cycle storage spaces to meet the minimum levels set out in Table 7.5 on the facing page.	All	1
8	14. Option 7 has been achieved. 15. Provide at least two compliant cyclists' facilities for the building users, (including pupils where appropriate to the building type) – see Definitions on page 194 for the scope of each compliant facility: – Showers – Changing facilities – Lockers – Drying spaces.	All	1

Sustainable transport measures			
9	Existing amenities: 16. At least three existing accessible amenities are present, see Table 7.6 on page 191, where relevant for a Building Group.	All	1
10	Enhanced amenities: 17. Ensure a minimum of one new accessible amenity, in accordance with Table 7.6 on page 191, for the relevant Building Group, is provided. OR		2
	18. Ensure more than one new accessible amenity, in accordance with Table 7.6 on page 191 for the relevant Building Group, is provided.		3
Assessment option	Alternative transport measures	Applicable building types	Points
11	19. Implement one site-specific improvement measure, not covered by the options already listed in this issue, in line with the recommendations of the travel plan. Submit this for review by BRE.	All	1-3

Table 7.5 Cycle storage criteria for each building type (option 7).

Building type	Number of spaces	Unit of measure	Notes
Commercial			
Offices, Industrial	1	10 staff	None.
Retail			
Large retail	1	10 staff	Use the maximum number of staff at any one time or shift. Provide staff spaces in addition to customer spaces. Separate spaces are encouraged but not essential as long as there is a minimum of 10 customer cycle spaces. Any retail development with at least 50 customer cycle storage spaces is compliant regardless of the number of parking spaces.
	1	20 public car parking spaces	The requirement for staff spaces would still need to be fully met.
Small retail	4	Total	Spaces are publicly accessible within proximity of a main building entrance. Compliant cyclists facilities are needed for staff only.
Education			
Preschool or crèche	1	10 staff	None.
Primary school	5	Per form or class in year group	This is based on one year group, not per year group. For example, a primary school that has three classes per year group would provide a total of 15 compliant cycle storages spaces for the whole school. If the number of forms or classes varies between year groups, base the calculation on the greatest number of classes or forms'.
Secondary schools and sixth form, further	1	10 staff and pupils and	FE and HE: student numbers account for both under- and post-graduates, as well as PhD students and post-doctorates. Use the sliding scale of compliance to determine the number

Building type	Number of spaces	Unit of measure	Notes
and higher education (FE and HE)		students in total	of cycle spaces if there are more than 200 building users.
Healthcare			
All healthcare building types	1	10 staff	Use the largest unit of measure for the building type, e.g. use beds for a hospital, use consulting rooms for a GP surgery. A minimum of four compliant cycle storage spaces is required.
	1	2 consulting rooms OR 10 beds	Special healthcare building types, e.g. chemotherapy outpatient centre or maternity ward—for such building types, given the nature of the building function, the cycle storage spaces for ‘2 consulting rooms OR 10 beds’ (i.e. those intended for patients and visitors), might be excluded, as it is unlikely that patients and accompanying visitors would be cycling to and from the centre.
Courts and prisons			
Prison establishment located building	1	10 staff	None.
Law court	1	10 building occupants (staff and visitors)	None.
Multi-residential			
Student residences, key worker accommodation	1	10 staff	A minimum of one compliant space is required.
	1	2 residents	
Sheltered housing, Care homes, Supported living facility	1	10 staff	None
	1	10 Visitors or beds	
Other building transport types			
Type A	Use office buildings criteria. The unit of measure for visitors or beds does not apply to hotels.		
Type B	1	10 staff	None
	1	10 visitors or beds	
Type C	1	20 staff	A reduction to the cyclist provision in rural locations has been accounted for in the unit of measure for this transport type. It should not therefore be applied again.
	1	20 building visitors or beds	
Transport hubs	1	10 public users	Apply the sliding scale (see Methodology on the facing page) to a maximum of 5000 daily public users. Public users are regular peak time users of the service who start or finish their public transport journey at the assessed building.
MOD non-	1	10 living-	These criteria apply to MOD buildings where the majority of

Building type	Number of spaces	Unit of measure	Notes
residential		out personnel	personnel live off-site.
MOD residential	1	2 residents	None
Where the number of building users (based upon the unit of measure) exceeds 200, the sliding scale of compliance can be used to identify the appropriate number of cycle spaces required.			

Table 7.6 Amenities applicable for option 9 and 10 for different Building Groups (BG).

Criteria	BG 1	BG 2	BG 3	BG 4	BG 5	BG 6
Proximity (metres)	500	500	500	500	500	500
Appropriate food outlet	✓	✓	✓	✓	✓	✓
Access to cash	✓	✓	✓	✓	✓	✓
Access to an outdoor open space (public or private, provided suitably sized and accessible to building users)	✓	✓	✓	✓	✓	✓
Access to a recreation or leisure facility for fitness or sports	✓	✓	✓	✓	✓	✓
Publicly available postal facility	✓	✓	✓	✓	✓	✓
Community facility	✓	✓	✓		✓	✓
Over the counter services associated with a pharmacy	✓	✓	✓	✓	✓	✓
Public sector GP surgery or general medical centre			✓		✓	✓
Child care facility or school	✓		✓		✓	✓

Key:

✓ - Amenity relevant to building type.

Building Types:

BG 1: Offices, Retail, Industrial, Courts and Prisons

BG 2: Preschool, Schools, Sixth Form

BG 3: Higher Education and Further Education

BG 4: Healthcare

BG 5: Multi-residential

BG 6: Other building types



Methodology

Campus or campus-style developments - entrance to consider

(options 1, 2, 9 and 10 in Table 7.4 on page 187)

The main entrance to the campus, e.g. further or higher education sites, can be used to determine the distance to amenities, if 80% or more of the buildings are within 1000m of this entrance.

If the site has more than one main entrance, either entrance can be used for the calculation.

Where less than 80% of the buildings are within 1000m of the campus' main entrance, the assessed building's main entrance must be used to determine the distance to a compliant node. This aims to encourage the location of public transport nodes inside or on the periphery of the campuses.

Number of building occupants unknown

(option 7 in Table 7.4 on page 187)

If the number of building occupants commuting to the development cannot be confirmed, e.g. speculative developments, use the default occupancy rates given in Table 7.7 on page 197 to determine a default number of users. Alternatively, the number of building occupants in an existing development of similar type and size can be used (the assessor must justify or validate the number used in their certification report).

Rural locations

(option 7 in Table 7.4 on page 187)

For sites in rural locations:

1. Where the distance to the nearest urban location is greater than 10 miles, the number of compliant cycle spaces can be reduced by 50%.
2. Where the distance to the nearest urban location is greater than 20 miles, the number of compliant cycle spaces can be reduced by 70%.
3. Where the distance to the nearest urban location is greater than 30 miles, the number of compliant cycle spaces can be reduced by 90%.

The reduction will also reduce the requirement for compliant showers and lockers by the same margin for most building types by default, since the calculation is based on the number of cycle storage spaces. Building types where the number of required showers or lockers is not based on cycle storage provision can reduce the actual requirement for compliant showers or lockers by 50%, 70% or 90% as appropriate. This reduction cannot be applied in addition to the 50% reduction due to the building's Public transport Accessibility level (as described in Methodology on the previous page).

Cycle spaces reduction

(option 7 in Table 7.4 on page 187)

Sites where the existing AI indicated in option 1 is met, can reduce the number of compliant cycle spaces requirement by 50%.

This reduction cannot be combined with the sliding scale.

Cyclists' facilities reduction

(option 8 in Table 7.4 on page 187)

Sites where the existing AI indicated in option 1 is met, can reduce the number of compliant cyclists facilities requirement by 50%.

This reduction cannot be combined with the sliding scale.

Sliding scale of compliance

(option 7 in Table 7.4 on page 187)

To recognise the increased confidence in availability that occurs where there is larger scale provision of facilities, it is acceptable to reduce the provision requirement for building users by increasing the standard unit of measure (defined in Table 7.5 on page 189):

1. For buildings with more than 200 users but less than or equal to 300, the unit of measure can be increased by a ratio of 1.5.
2. For buildings with more than 300 users but less than or equal to 400, the unit of measure can be increased by a ratio of 2.
3. For buildings with more than 400 users, the unit of measure can be increased by a ratio of 2.5.

The calculation starts from the first 200 building users, with no ratio, and keeps going considering the ratio only for the remaining building users.

For example, an office building with 800 users would be required to provide the following number of cycle storage spaces:

- 1–200 users @ 1 space per 10 users = 20 spaces
- 201–300 users @ 1 space per 15 users (standard unit of measure x 1.5) = 7 spaces
- 301–400 users @ 1 space per 20 users (standard unit of measure x 2) = 5 spaces

- $401 + \text{users} @ 1 \text{ space per } 25 \text{ users (standard unit of measure } \times 2.5) = 16 \text{ spaces}$
- Total compliant cycle storage spaces required = 48 spaces.

The sliding scale of compliance does not apply to the following building types: large retail, primary schools, multi-residential buildings and MOD residential buildings.

Minimum cycle storage provision

(option 7 in Table 7.4 on page 187)

Where the calculated number of required cycle storage spaces is less than four, total provision should be based on the lower of the following:

- A minimum of four compliant storage spaces must be provided OR
- One space per user (staff and where appropriate other user groups).

Provision of cycle storage and facilities on sites with multiple buildings

(option 7 and 8 in Table 7.4 on page 187)

Where a new or infill building is constructed on an existing site, or multiple new buildings are to be constructed on the same site, compliance with this issue may be assessed based on the standalone building or on a site-wide basis. How this is determined depends on the configuration of the proposed cycle storage and cycle facilities, and the interpretation and justification of the assessor.

Standalone approach

(option 7 and 8 in Table 7.4 on page 187)

Cycle storage and associated facilities for the assessed building only:

Cycle storage:

- The number of cycle storage spaces is compliant based on the number of users in the assessed building. The sliding scale of compliance can be used (where applicable) when determining the number of storage spaces required.
- All storage spaces provided must be BREEAM compliant and these must be located within or in close proximity to the assessed building.
- Access arrangements, demarcation and positioning clearly associates the cycle storage provided with the assessed building only, within or in close proximity to the assessed building.
- Access arrangements, demarcation and positioning clearly associates the cycle storage provided with the assessed building only.

Cyclists' facilities:

- All new and existing facilities may be included, provided they are BREEAM compliant.
- Facilities should be located within the assessed building, or in an accessible adjacent building, for the sole use of the assessed building's users.

Site-wide approach

(option 7 and 8 in Table 7.4 on page 187)

Cycle storage and associated facilities accessible to users of the entire site, or where there is a distinct group of local buildings within a site that would share facilities:

Cycle storage:

- The number of cycle storage spaces is compliant based on the number of users on site or within a group of local buildings. The sliding scale of compliance can be used (where applicable) when determining the number of storage spaces required.
- All new storage spaces must be BREEAM compliant. Existing storage spaces may also be counted provided they allow bikes to be easily stored and accessed with the ability to be locked securely against a fixed structure.

Cyclists' facilities:

- The number of compliant cyclists' facilities is based on the number of users on site who would be able to use these facilities.
- Cyclists' facilities may be located anywhere on site. However, the total route that cyclists must take to access the nearest cycle storage, cyclists' facilities and building entrances, must be no greater than 500m via a safe and

convenient route, as measured from the first to the last point on the route. Where possible, different types of cyclists' facilities should be grouped together in designated areas for ease of access and use.

- All new and existing facilities may be included, provided they are BREEAM compliant and conform to the 500m requirement above.

Combination of the two approaches

(option 7 and 8 in Table 7.4 on page 187)

A mix of the two approaches can be applied where cycle storage is delivered as a site-wide approach and facilities are being met for the assessed building only. However, where the opposite is being proposed (i.e. storage spaces are provided only for the assessed building and facilities are provided on a site-wide basis); the number of compliant cyclists' facilities must be based on the number of users on site and the facilities must be located in an accessible location in close proximity to the storage spaces.

Phased developments

(option 7 in Table 7.4 on page 187)

Where cycle storage cannot be installed at construction stage, due to phasing or pending demolition works, compliance may still be demonstrated provided:

- Clarification and justification is given for why the storage is not currently available.
- A written contractual agreement is in place to provide BREEAM compliant storage within a clear and justifiable time scale taking into account any related works which would reasonably delay final installation of facilities relating to the development
- Alternative storage is provided in the meantime that allows bikes to be easily stored and removed, with the ability to be locked securely against a fixed structure.

The methodology above applies to cycle storage only, and cannot be applied to provision of cyclists' facilities which must be assessed as normal.



Evidence

Criteria	Interim design stage	Final post construction stage
All	One or more of the appropriate evidence types listed in The BREEAM evidential requirements on page 29 can be used to demonstrate compliance with these criteria	



Definitions

Accessible amenities

Amenities (as listed) that are accessible via safe pedestrian routes, e.g. pavements, paths and safe crossing points or, where provided, dedicated pedestrian crossing points. The distance should not be measured in a straight line, 'as the crow flies', but along the actual route.

Additional building transport type classifications

Other building transport type A: A building predominantly occupied by staff or employees with occasional business related visitors. This includes residential buildings with transient visitors, e.g. hotels, hostels, training centres where the visitor typically resides for less than one month.

Other building transport type B: A building occupied by a number of core staff or employees with a larger number of consistently frequent visitors or users (either resident or non-resident). This includes secure accommodations.

Other building transport type C: As type B, but building transport types specifically required to be located rurally as a result of their function, i.e. buildings which would never be located within an urban area, e.g. a National Park visitor centre.

Appropriate food outlet

Access to a food supply that is affordable to the majority of the building users as well as being appropriate for their day-to-day needs. For example, a small office building with a small shop selling sandwiches or snacks, or a multi-residential building with a restaurant in the local area.

Child care or school

To provide child support for potential building users. For example, a nursery, child minding facilities or a school local to the development.

Community facility

An internal space that will facilitate community activities for the assessed building and its users. For example, for a multi-residential building this could be a community hall or, for an office building, a public house.

Compliant cycle storage spaces

Compliant cycle storage spaces are defined as those meeting the following:

- Cycles can be secured within spaces in racks with overhead covering. The cycle racks are set in or fixed to a permanent structure (building or hardstanding) or alternatively, may be located in a locked structure fixed to, or part of, a permanent structure with appropriate surveillance
- The distance between each cycle rack, and the cycle racks and other obstructions, e.g. a wall, allows appropriate access to the cycle storage space for easy storage and access to bikes
- The storage facility or entrance to the facility is in a prominent site location visible to potential users from either an occupied building or a main access to a building
- The cycle storage facility has adequate lighting; demonstrated by meeting the lighting criteria in BREEAM issue Assessment scope on page 74
- The lighting must be controlled to avoid out-of-hours use and operation during daylight hours, where there is sufficient daylight in or around the facility.

Compliant changing facilities

Compliant changing facilities are defined as those that meet the following:

- Appropriately sized for the likely or required number of users. The assessor should use their judgement to determine whether the changing area is appropriately sized given the number of cycle storage spaces or showers provided
- Account for privacy to allow cyclists of either gender to change in private
- Changing areas must include adequate space and facilities to hang or store clothing and equipment while changing or showering, e.g. bench seat or hooks
- Toilet or shower cubicles cannot be counted as compliant changing facilities.

Compliant drying spaces

A compliant drying space is defined as a space that is specifically designed and designated for this purpose. It should be provided with suitable finishes, adequate heating and ventilation and the facility to hang wet clothes with sufficient air movement around them to dry effectively.

Examples of non-compliant spaces:

- Plant rooms: these are not specifically designed for the purpose and their use as a drying space may create a health and safety hazard;
- Coat hooks in cloakrooms or staff changing areas: these are not specifically designed and are unlikely to provide adequate ventilation or allow sufficient air movement to dry clothing effectively.

Compliant lockers

Compliant lockers are defined as those meeting the following:

- The number of lockers is at least equal to the number of cycle spaces required
- Lockers are in or adjacent to compliant changing rooms, where provided
- The lockers are sized appropriately for the storage of a cyclists' equipment.

Compliant showers

Compliant showers are defined as those meeting the following:

- Provision of one shower for every 10 cycle storage spaces, subject to a minimum provision of one shower
- Any building providing eight showers or more complies regardless of the number of cycle storage spaces provided
- Both male and female users must be catered for, either separate showers within shared gender-specific facilities (required provision split 50-50) or single shower cubicles and changing space for mixed use
- The showers do not need to be dedicated to cyclists and can be those shared with other users or uses.

Dedicated service

The option of a dedicated bus service is available for any building type with a fixed shift pattern. Examples could include schools, offices, retail, factories, prisons etc. The bus must provide transfer to the local population centre, public transport interchange or be a door-to-door service.

Large retail type

Includes large retail developments, such as shopping centres, retail parks and supermarkets, which typically will have covered or uncovered parking, or external areas, and therefore scope to provide their own dedicated cyclists' facilities.

Small retail type

Includes smaller retail units or shops that may form part of a wider retail or business district, city or town centre, or mixed use sites, and typically do not have the scope to provide their own dedicated cyclists' facilities.

Outdoor space (public or private, suitably sized and accessible to building users)

A space that enables building users to take a break from internal building activities. For example, an office building with space to sit outside for lunch. The space must be suitably sized for the building users associated with the project and not form part of the public highway.

Recreation or leisure facility

A facility that allows building users to exercise and maintain a healthy lifestyle. For example, a local leisure centre, tennis courts, an on-site gym or, for a school, a local playground.

Rural location

A rural location is defined in this context as a site clearly not within or on the boundary of a small, medium or large urban cover. An urban cover will have a population of 3000 people or more, located within a tract of continuously built-up urban land extending 20 hectares or more. The definition of rural includes village locations, green field sites or small urban centres with a population of less than 3000 people within a tract of land no greater than 20 hectares. Such locations will most likely be on a local bus route to larger urban areas or other local towns and may have local shops and other facilities. This classification is based on the Department of Transport National Travel Survey definition, which specifies urban areas based on the extent of urban development indicated on Ordnance Survey maps.

Rural location-sensitive buildings

This definition includes any of the building types with a demonstrable social or economic need from a rural population for the service provided by the new building, such that it is not feasible to locate it at an alternative site. Examples of building types that may fall into this category:

1. Offices where providing services to the local community
2. Industrial where providing services to the local community
3. Retail where providing services to the local community
4. Preschool, primary and secondary school
5. GP surgery.

Additional information

Table 7.7 Default occupancy rates by building type

Building type and function area	Occupant density
Business	
Office area (including reception areas)	0.111
Food preparation area (staffed)	0.108
Small workshop or category lab space	0.050
Industrial	
Food preparation area	0.213
Industrial process area	0.050
Laboratory	0.050
Reception	0.110
Warehouse storage	0.050
Generic office area	0.108
Hospitals, care homes	
Reception	0.152
Post mortem facility	0.050
Food preparation area	0.161
Physiotherapy studio	0.200
Bedroom unit	0.105
Laundry	0.117
24-hours consulting or treatment areas	0.07
Assembly areas or halls	1.000
Hydrotherapy pool hall	0.100
Industrial process area	0.124
Laboratory	0.080
Operating theatre	0.125
Classroom	1.000
Diagnostic imaging	0.100
Generic ward	0.175
Office and consulting area	0.195
Primary Healthcare	
Reception	0.110
Office and consulting areas	0.082
Further and Higher Education	
Residents Bedroom	0.120
Classroom	0.203
Food preparation area	0.096
Hall, lecture theatre or assembly area	0.202
Computer laboratory	0.231
Laboratory	0.106
Laundry	0.105
Reception	0.112
Workshop - small scale	0.068
Office and consulting areas	0.103
Hotels	
Bedroom	0.050

Building type and function area	Occupant density
Food preparation area	0.108
Reception	0.105
Generic office area	0.106
Secure Residential Institution	
Cell	0.190
Reception	0.121
Hall, lecture theatre or assembly area	0.183
Eating and drinking area	0.141
Workshop - small-scale	0.048
Laundry	0.086
Classroom	0.183
Office and consulting areas	0.093
Food preparation area	0.111
Libraries, Museums, Galleries	
Reception	0.095
Food preparation area	0.176
Hall, lecture theatre or assembly area	0.150
Laboratory	0.098
Workshop - small-scale	0.062
Display and public areas	0.150
Generic office area	0.099
General Assembly and Leisure, Clubs, Theatres	
Dry sports hall	0.047
Fitness studio	0.132
Fitness suite or gym	0.170
Food preparation area	0.131
Hall, lecture theatre or assembly area	0.175
Auditorium	0.341
Ice rink	0.225
Performance area (stage)	0.049
Public circulation areas	0.241
Reception	0.126
Sales area – general	0.102
Swimming pool	0.163
Workshop – small-scale	0.067
Generic office area	0.116
Community or Day Centres	
Reception	0.108
Dry sports hall	0.047
Food preparation area	0.143
Workshop – small scale	0.064
Hall, lecture theatre or assembly area	0.169
Office and consulting areas	0.106
Other Spaces and Buildings	
Data centre	0.096
Server room	0.096

Building type and function area	Occupant density
Heavy plant room	0.096
1. The net floor area for each function must be multiplied by the equivalent occupant density to determine an overall occupancy for the function area. 2. Not all potential building areas are listed, only those required to reflect estimated building occupancy for the building type. For example, an office building may have a canteen but it will be the staff that predominantly use the canteen. The office staff numbers will be estimated using the default occupancy rate for the office area; therefore to include the canteen would result in double counting of occupancy. 3. If a building type is not listed, occupancy rates for a similar building type or function area may be used. 4. The above occupancy rates have been sourced from the activity database of the Simplified Building Energy Model (SBEM), v.5.4a.	



Appendix D

BREEAM Accessibility Index Calculator

BREEAM 2014 Tra01 Public Transport Accessibility calculator



Using the drop down boxes make the relevant selections and press the 'Select' button

Building type:

No. nodes required:

Dedicated bus service:

☐ Building in Greater London?

Select

NODE 1

Public transport type	Bus										
Distance to node (m)	160										
	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	
Average frequency per hour	1										

NODE 2

Public transport type	Bus										
Distance to node (m)	250										
	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	
Average frequency per hour	2										

NODE 3

Public transport type	Rail										
Distance to node (m)	1000										
	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	
Average frequency per hour	4										

Accessibility Index 3.38

Tra01 total credits achieved 1