Benesco Charity Ltd

Proposed Office Extension, Bedford House, John Street, London

Framework Travel Plan

January 2017

A099110

Address: Hawkridge House, Chelston Business Park, Wellington, Somerset, TA21 8YA

Tel: 01823 666150

Email: jack.wellings@wyg.co.uk



Document Control

Project: Proposed Office Extension at Bedford House, John Street, London

Client: Benesco Charity Ltd

Job Number: A099110

File Origin: Q:\Projects\A099001 - A099500\A099110 - Bedford House, John St,

London\Correspondence\Reports\Travel Plan\Drafts

Prepared by:	Jack Wellings	Signed: 2.0. rellutor
Checked by:	Antonio Pinto	Signed:
Verified by:	Luke Craddy	Signed:

Issue	Date	Status
1	17.01.2017	Draft
2	25.01.2017	Final
3	25.05.2017	Final (Updated Local Planning Policy)



Contents

1.0	Introduction	4
1.1	Project Brief	4
1.2	What is a Travel Plan	4
1.3	Travel Plan Benefits	5
1.4	Report Structure	6
2.0	Travel Plan Policy	7
2.1	National Policy	7
2.2	Regional and Local Policy and Guidance	8
3.0	Site Context	13
3.1	Site Location	13
3.2	Access by Walking	14
3.3	Access by Cycling	14
3.4	Access by Bus	15
3.5	Access by Rail	16
3.6	Public Transport Accessibility Level Assessment	17
4.0	Aims, Objectives and Targets	18
4.1	Introduction	18
4.2	Framework Travel Plan Aims	18
4.3	Framework Travel Plan Objectives	18
4.4	Proposed Travel Context	18
4.5	Framework Travel Plan Targets	19
5.0	Framework Travel Plan Strategy and Responsibility	20
5.1	Introduction	20
5.2	Travel Plan Strategy	20
5.3	Travel Plan Responsibility	20
5.4	Longer Term Management	21
6.0	Framework Travel Plan Measures	22
5.1	Introduction	22
5.2	Staff Travel Plan Measures	22
5.3	Visitor Travel Plan Measures	25
5.4	Action Plan	25



7.0	Implementation, Monitoring and Review	27
7.1	Introduction	27
7.2	Implementation	27
7.3	Monitoring and Review	27
8.0	Summary and Conclusion	27
8.1	Summary	27
8.2	Conclusion	27

Tables and Figures

- **Table 3.1 Local Bus Services**
- **Table 3.2 Rail Journey Times to Principle Destinations**
- **Table 4.1 Proposed Use Multi Modal Trip Generation**
- **Table 6.1 Local Bus Services**
- **Figure 1.1 Travel Plan Pyramid**
- **Figure 3.1 Site Location Plan**
- **Figure 3.2: Public Transport Accessibility Levels**

Appendices

Appendix A PTAL Assessment



1.0 Introduction

1.1 Project Brief

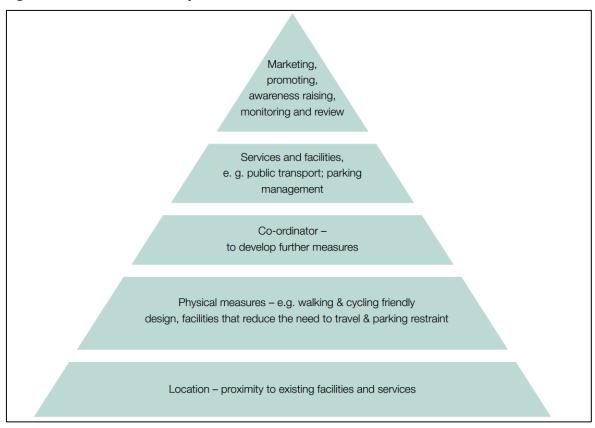
- 1.1.1 WYG has been appointed by Benesco Charity Ltd to prepare a Travel Plan (TP) in support of the development of Bedford House, John Street in London. The proposal for the scheme is to provide a vertical extension to Bedford House with this increasing the existing floor area from 3,627m2 to 4,702m2.
- 1.1.2 The development site is located within Camden on the western side of John Street, approximately 1km north west of Farringdon Railway Station. The pedestrian access to the site is provided from John Street. This arrangement will be retained as part of the scheme development with no existing or new parking available on site.
- 1.1.3 Preparation of this document has been undertaken with consideration towards key Policy and Guidance Documents, set out by the London of Borough of Camden and Transport for London (TfL). The document is focused on the extended element of Bedford House however the document can be applied to the site as a whole.

1.2 What is a Travel Plan

- 1.2.1 A Travel Plan is a long term management strategy that seeks to deliver sustainable transport objectives through positive actions. It supports the development of a sustainable site. A Travel Plan involves identifying a specific package of measures for an individual site which is aimed at promoting and raising awareness of sustainable travel.
- 1.2.2 This document is a live document and over the lifespan of the document, it should be reviewed and updated accordingly.
- 1.2.3 **Figure 1.1** presents the travel plan pyramid which shows the principles for an effective Travel Plan. The foundation of an effective Travel Plan is a sustainable location, with physical measures building upon this. At the top of the pyramid is promotion and marketing which aims to achieve effective and consistent communication with all those affected by the Travel Plan.



Figure 1.1 Travel Plan Pyramid



Source: Figure 4.2, pg. 53 of 'Delivering Travel Plans through the Planning Process' (DfT, 2006)

1.2.4 This Travel Plan Pyramid considers and appropriately provides for each stage of the pyramid, to ensure that an effective Travel Plan is secured.

1.3 Travel Plan Benefits

- 1.3.1 The primary benefits of a workplace Travel Plan is that it will help in reducing congestion and traffic related pollution for the local area. Additional benefits that come from having a Travel Plan include:
 - Widening the choice of travel modes for all those travelling to and from the site;
 - Increasing accessibility to employment for all, which can broaden the skills pool for the employer;
 - Improve public image, reduce employee stress through healthier forms of travel and encourage flexible working practices; and
 - Produce savings and identify cost-cutting travel practices that can benefit staff and employers.



1.4 Report Structure

- 1.4.1 The structure of this report is as follows:
 - Chapter 2 outlines the National and Local Policy for Travel Plans;
 - Chapter 3 outlines the existing sustainable travel provision in the vicinity of the proposed development;
 - Chapter 4 outlines the aims, objectives and targets of the Travel Plan;
 - Chapter 5 outlines the management strategy of the Travel Plan;
 - Chapter 6 outlines the proposed measures;
 - Chapter 7 sets out the monitoring and review process of the Travel Plan; and
 - Chapter 8 summarises and concludes the report.



2.0 Travel Plan Policy

2.1 National Policy

National Planning Policy Framework (2012)

- 2.1.1 The National Planning Policy Framework (NPPF) was published on 27 March 2012 and is defined as being the document that 'sets the Government's planning policies for England and how these are expected to be applied.'
- 2.1.2 The NPPF is not a transport specific document rather it sets out the Governments general requirements for the planning system. The NPPF incorporates guidance for local planning authorities when defining their local plans and in determining planning application. The purpose of the planning system, as identified in the NPPF, is to contribute to the achievement of sustainable development, with three 'dimensions' identified as supporting this, these dimensions are:
 - Economic by identifying and coordinating development requirements in order to build competitive, responsive and strong economy;
 - Social by supporting strong, vibrant and healthy communities;
 - Environmental by contribution to protecting and enhancing natural, built and historic environment.
- 2.1.3 The NPPF is sub divided into different disciplines. Section 4 of the NPPF is Promoting sustainable transport. In Section 4, Paragraph 35 promotes development that is located and designed to:
 - Accommodate the efficient delivery of goods and supplies;
 - Give priority to pedestrians and cycle movements, and have access to high quality public transport facilities;
 - Create safe and secure layouts which minimise conflicts between traffic and cyclists / pedestrians and avoiding street clutter; and
 - Consider the needs of people with disabilities by all modes of travel.
- 2.1.4 The NPPF identifies that a key tool to facilitate the use of sustainable transport is the provision of a Travel Plan. All developments which generate significant amounts of movements should be required to provide a Travel Plan.



Planning Policy Guidance

- 2.1.5 The Government launched its Planning Practice Guidance (PPG) on 6th March 2014. The associated website brings together many areas of English planning guidance into a new format, linked to NPPF.
- 2.1.6 The PPG identifies that Travel Plans evaluate and consider:
 - Benchmark travel data including trip generation databases;
 - Information concerning the nature of the proposed development and the forecast level of trips by all modes of transport likely to be associated with the development;
 - Relevant information about existing travel habits in the surrounding area;
 - Proposals to reduce the need for travel to and from the site via all modes of transport; and
 - Provision of improved public transport services.

2.2 Regional and Local Policy and Guidance

London Plan March 2016 MALP - The Spatial Development Strategy for London Consolidated with Alterations since 2011

- 2.2.1 The London Plan is the statutory spatial development strategy for the Greater London area that is written by the Mayor of London and published by the Greater London Authority. It sets out the *overall* strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20 25 years."
- 2.2.2 The adopted London Plan was published in July 2011 and has 2031 as a formal end date. Since June 2012, minor alterations have been made to the London Plan to comply with the National Planning Policy Framework and other changes in National Policy. These changes are ongoing, with the most recent change submitted for consultation in March 2016, for examination in public.

Chapter 6 of the London Plan details the strategic objective for transport, which is to enable London to be 'a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling, makes better use of the Thames, and supports delivery of all the objectives of this Plan.' Travel Plans are identified as a requirement of planning applications, with this specifically identified in Policy 6.3. This policy sets out the effects of development on transport capacity.



- 2.2.3 The cycle parking standards in the London Plan for B1 employment use is separated into long and short stay. The minimum long stay cycle parking requirements in inner / central London is 1 space per 90m. For short stay cycle parking the minimum requirement is 1 space per 500sqm for the first 5,000sqm of floor space and thereafter 1 space per 5,000sqm. The London Plan also recommends that supporting facilities should be provided at land uses such as places of employments. These supporting facilities include lockers, showers and changing rooms.
- 2.2.4 With regards car parking and the development of car free schemes the policy 6.13 identifies that 'in locations with high public transport accessibility, car-free developments should be promoted (while still providing for disabled people).' In order to determine the suitability of proposed parking levels it is identified that Transport Assessments and Travel Plans should be prepared that provide details of scheme proposals in order that the necessary parking levels can be determined.

Camden Core Strategy 2010 - 2025

- 2.2.5 The Camden Core Strategy (CCS) set out the key elements of the Council's planning vision and strategy for the borough. It is the central part of the Local Plan, which comprises a group of documents setting out the planning strategy and policies for the area. It was adopted in November 2010.
- 2.2.6 The CCS sets out four key aims, which is to make Camden:
 - A sustainable location that adapts to a growing population;
 - A strong economy that includes everyone;
 - A connected community where people lead active, healthy lives; and
 - A safe environment that is a vibrant part of the city.
- 2.2.7 Camden Council have created a travel awareness programme which works to encourage more sustainable travel to schools, businesses and communities. The council also work with businesses to produce Travel Plan which provide a package of measures to encourage safe, healthy and sustainable travel options which include reducing the need to travel and avoiding unnecessary car journeys. The council also work to promote active means of travel such as walking and cycling. Camden is part of the North Central Travel Plan Network which is a group of north and central London boroughs. The network offers advice to business to help them to develop travel plans. This initiative is supported by Transport for London.



Camden Development Policies 2010 - 2025

- 2.2.8 Camden Development Policies (CPD) forms part of the Council's Local Plan, the group of documents setting out the planning strategy and policies for Camden. The CPD contributes towards delivering the Core Strategy by setting out detailed planning policies that the Council will use when determining applications for planning permission in the borough to achieve the vision and objectives of the Core Strategy. It was adopted in November 2010.
- 2.2.9 It states that a travel plan is expected for developments which require a transport assessment. A travel plan is a way of mitigating the transport impact of the development. "The Transport for London Guidance for Workplace Travel Planning for Development (2008) states that a simplified travel plan (an Enterprise Scale Travel Plan) should be provided for business and establishes the travel plan thresholds where 20 or more staff will be employed."

Transport for London Travel Planning Guidance

- 2.2.10 In November 2013, TfL released new guidance on the requirements for Travel Plans for new developments in London. This guidance includes an explanation of the process, when a Travel Plan is required, what it should contain, and how to monitor, secure and enforce travel plans.
- 2.2.11 The document recognises that the overarching purpose of any Travel Plan should be to influence behaviour change and lead to the use of more sustainable modes of travel and/or to reduce overall travel to/from the site. This is critical for new developments in order to facilitate the use of sustainable modes among occupiers and visitors from the outset, or to mitigate the impact of trips generated by the site.

Camden Local Plan Submission Draft

- 2.2.12 The Camden Local Plan Submission Draft (LP) is not yet adopted Policy. The document was submitted to the Secretary of State in June 2016 and was subjected to an independent examination in October 2016. The Council published the proposed modifications in October 2016, the Local Plan Inspector suggested further Main Modifications in May 2017 and these are a material consideration as the Draft Local Plan progresses. Once adopted, the document will replace the CCS and form the basis of the Local Development Framework. It is therefore considered that the document with recently suggested Main Modifications is material for consideration within this application, as LBC have identified it for adoption in 2017.
- 2.2.13 The LP will set out the Council's planning policies and will replace the current Core Strategy and associated Development Policies planning documents, when adopted. The LP will be the key delivery mechanism for the Camden area, aiming to:



- Reduce inequality;
- Improve health and wellbeing;
- Promote economic growth; and
- Ensure sustainable neighbourhoods.
- 2.2.14 In regards to transportation and highways, the LP aims to promote sustainable transport choices, promoting developments that prioritise the needs of pedestrians and cyclists and ensure that sustainable transport will be the primary means of travel to and from the site.
- 2.2.15 Policy T1 promotes that new developments should promote travel by walking, cycling and public transport. Ensuring that new developments are located within well connected areas which can easily integrate into existing sustainable transport infrastructure, making improvements where necessary to ensure an attractive environment for sustainable travel. The Local Plan Inspector has suggested an amendment to policy T1 to strengthen the requirements for development contributions to fund improvements to the bus network infrastructure. This will include access to bus stop, shelters, passenger seating, waiting areas, signage and timetable information. The amendments continue to state that 'contributions will be sought where the demand for bus services generated by the development is likely to exceed existing capacity.'
- 2.2.16 Policy T2 sets the requirement for new developments to be car free, with the exception of spaces designated for disabled people or essential operational or service vehicles.

Camden Planning Guidance 7 - Transport

- 2.2.17 The Camden Planning Guidance (CPG) documents were prepared to support the Policies set out by the Local Development Framework. CPG 7 was adopted in 2011, and relates specifically to transportation and highway matters in regards to new developments. It aims to make sure that applicants submit all the information that is needed to determine a planning application in terms of the assessment of transport conditions before and after the development has taken place, and transport measures that will need to be secured before a development comes into use.
- 2.2.18 CPG7 recognises that Travel Plans can:
 - Reduce inequality;
 - Improve health and wellbeing;
 - Promote economic growth; and
 - Ensure sustainable neighbourhoods.



- 2.2.19 It defines a Travel Plan as a document which "enable a development to proceed without adverse impact on the transport system" and "the requirements of a Travel Plan will be tailored to the specific characteristics of the site and the development."
- 2.2.20 CPG7 specifically sets outs the requirements for a workplace Travel Plan. It states that a workplace travel plan is geared to promote alternatives to single occupancy car use. It continues to say that "workplace travel plans are potentially suitable for any organisation that generates a significant number of employee trips," which includes offices.
- 2.2.21 A workplace travel plan needs to address travel by staff to and from work and any travel made on business. The key components necessary for all workplace travel plans are;
 - Corporate management support and commitment;
 - Designated travel co-ordinator;
 - Consultation on the plan;
 - Staff travel surveys baseline and monitoring;
 - Targets challenging but achievable;
 - Promotion of the package to the workforce; and
 - Monitoring on going, to check and maintain progress and development.



3.0 Site Context

3.1 Site Location

- 3.1.1 The development site is located approximately 2km to the north east of the Central London and approximately 1km north west of Farringdon Railway Station.
- 3.1.2 The location of the development site is illustrated in **Figure 3.1**.

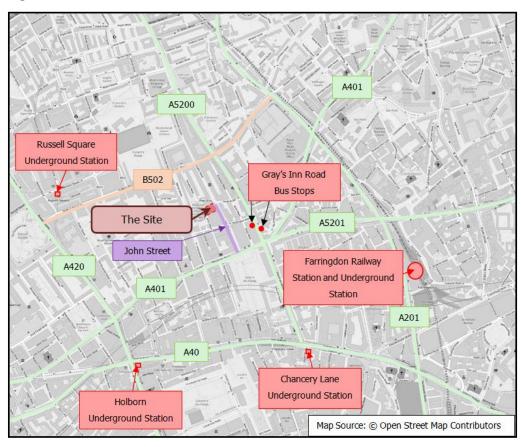


Figure 3.1 Site Location Plan

3.1.3 Bedford House is located on John Street with frontage also provided onto John's Mews. Pedestrian access is provided to the building from John Street whilst a service access is available from John's Mews.



3.2 Access by Walking

- 3.2.1 The proposed development site benefits from an existing pedestrian access to the footways located along John Street. John Street forms part of the local pedestrian network for Camden, which comprises a network of footways, footpaths and pedestrian crossing points. It provides connections to Doughty Mews, Roger Street and Doughty Mews, the A401 Theobolds Road and the A5200 Grays Inn Road footways, which assist the movement of pedestrians to the local and wider area.
- 3.2.2 A Zebra crossing is provided 65m to the south of the site across John Street. Two pedestrian refuges are provided to the north and south of the A401 Theobolds Road / John Street priority junction. These are located approximately 190m to the south of the development site.
- 3.2.3 In addition, the junction between the A401 Theobolds Road and A5200 Grays Inn Road provides Toucan crossings. Pedestrian crossings and pedestrian refuges are provided along Grays Inn Road parallel to John Street.
- 3.2.4 It should be noted that there are a number of local transport interchanges which can easily be accessed by walking to / from the proposed development site, using the local pedestrian network. This includes (but is not limited to) bus stops, London Underground stations and Railway Stations.
- 3.2.5 It is therefore considered that the site is well suited to encourage a large number of trips to be undertaken by walking, when accessing the local area or using key transport interchanges.

3.3 Access by Cycling

- 3.3.1 There are no designated cycle routes in the near vicinity of the site. However, roads within the vicinity of the site are 30mph roads and in certain places, bus lanes are provided for cyclists to use. At the junction of A5200 Grays Inn Road and A401 Theobolds Road, advanced stop lines are provided for cyclists on both the A401 arm and the southern arm of the A5200.
- 3.3.2 It is considered that the nature of the roads in the vicinity of the site would not discourage people to cycle to work. There is therefore potential for future users to use bicycles to travel to / from the building.



3.3.3 Furthermore, cycling can also be used as part of a multi-modal journey, when considering the proximity of local stations. Farringdon Railway Station is located approximately 1km from the proposed development site, and can be reached within 5 minutes by cycling. Additionally, King's Cross Railway Station is located at a distance of 2.3km, and accessible within a 10 minute bike ride. Given the proximity of Railway Stations to the development site, this could be a realistic option for employees of Bedford House.

3.4 Access by Bus

- 3.4.1 The nearest bus stops to the site are located on Grays Inn Road and Theobalds Road, within 400m minutes of the site and accessible within a 5 minute walk. The stops benefit from shelter, timetable information and street lighting. Grays Inn Road and Theobalds Road are both considered key arterial bus routes within Camden, and as such, benefit from a high provision of bus services to the local and wider area.
- 3.4.2 **Table 3.1** provides a summary of the services which serve the stops.

		Table 3.1 - Local	Bus Service	es				
			One-way Frequency					
Service	Operator	Route	Mon-Fri	Mon-Fri (Evening)	Saturday	Sunday		
Grays In	n Road							
17	Metroline Travel	Holloway, Nag's Head - King's Cross - London Bridge	7 per hour	4 per hour after 21:00	5 per day	4 per hour		
45	rays Inn Road 17 Metroline Travel Holloway, Nag's King's Cross - Lond 45 London Central Bus Company 46 Metroline Travel Lancaster Gate - Town - St. Barthon Hospital 19 London General Finsbury Park - Is Holborn - Piccadilly Battersea Bri 243 Arriva London 38 Arriva London Clapton Pond - Wictoria	King's Cross - Elephant & Castle - Clapham Park	7 per hour	4 per hour after 21:00	6 per hour	5 per hour		
46		Lancaster Gate - Kentish Town - St. Bartholomew's Hospital	Every 10 minutes	4 per hour after 20:00	Every 10 minutes	Every 15 minutes		
Theobole	ds Road							
19	London General	Finsbury Park – Islington – Holborn – Piccadilly Circus – Battersea Bridge	8 per hour	11 per hour	7 per hour	6 per hour		
243	Arriva London	Wood Green – Tottenham – Shoreditch – Waterloo	8 per hour	18 per hour	8 per hour	6 per hour		
38	Arriva London	Clapton Pond – Angel - Victoria	18 per hour	Every 3 minutes	15 per hour	11 per hour		
55		Leyton - Shoreditch - Oxford Circus	10 per hour	Every 5 minutes	8 per hour	6 per hour		

Table 3.1 shows that the stops benefit from regular connections to the local and wider area, with most providing a minimum average of 7 per hour during the week. It is therefore considered that travel by bus will likely be a favourable mode of transport for future site users.



3.5 Access by Rail

Underground

- 3.5.1 The nearest Underground Station to the site is Chancery Lane, which is served by the Central Line. The station is approximately 700m from the proposed site and is accessible within a 10 minute walk. Chancery Lane is located on the Central Line, which provides connections to Ealing, Epping and Ruislip. The Central Line provides on average 6 trains per hour.
- 3.5.2 The site is also located within a 12 minute walk (1km) of Farringdon Underground Station which is served by the Circle, Hammersmith & City and Metropolitan Lines. The station provides regular connections to Hammersmith, Edgware Road, Barking, Aldgate and Watford, running via a number of intermediary stops. The Metropolitan Line provides on average 4 services per hour, with the Circle Line and Hammersmith & City Line providing 6 services per hour.
- 3.5.3 Holborn Underground Station is located on the Piccadilly Line, providing additional connections to Cockfosters, Heathrow and Uxbridge. On average the line provides 3 to 6 trains per hour. The station is located within 800m of the site, and can be accessed within a 10 minute walk.
- 3.5.4 Given the close proximity of underground rail stations and the number of rail lines that they serve, it is considered that travel on the underground is likely to be a favourable mode of travel for future site users.

Rail

3.5.5 The nearest railway station to the site is Farringdon Railway Station which is approximately 1km to the southeast of the site and accessible within a 12 minute walk. **Table 3.2** sets out selected destinations, journey times and frequency of services from this station.

Table 3.2 - Rail Jou	rney Times to Principle Destinations	
Destination	Journey Time	Frequency
Bedford	1 hour	4 per hour
Sutton (Surrey)	45 minutes / 1 hour	4 per hour
Sevenoaks	1 hour 8 minutes	Every Half an Hour
Luton	35 minutes / 55 minutes	6 per hour
St Albans	26 minutes / 40 minutes	8 per hour
Three Bridges	1 hour	3 per hour
Brighton	1 hour 30 minutes	Every half an hour
Gatwick Airport	1 hour	Every 15 minutes
Wimbledon	39 minutes	Every half an hour



- 3.5.6 The station provides suburban rail journeys to a wide range of destinations within London and outside London. The suburban areas include the south London suburb of Wimbledon. The other towns served include Bedford, Luton and Brighton.
- 3.5.7 Farringdon Railway Station forms part of the wider works associated with increasing public transport connectivity across the London area. The station will become a major interchange station following the operation of Thameslink and Crossrail, both scheduled for completion in 2018. Post operation, the station will likely experience increased connectivity and travel times to the local and wider areas.

3.6 Public Transport Accessibility Level Assessment

- 3.6.1 A Public Transport Accessibility Level Assessment (PTAL) has been undertaken to assess the access level of the site to the public transport network. The Assessment has been undertaken using the Transport for London (TfL) software WebCAT.
- 3.6.2 The WebCAT outputs show that the location of the site is on the boundary of two PTAL scores. The western side of the building is in PTAL Output 6a and the eastern side of the building is in 6b. Both 6a and 6b are categorised as locations which are in an area that is 'excellent' for access to public transport. **Figure 3.2** confirms the PTAL range and description for the 6a and 6b PTAL scores whilst the full PTAL report is provided at **Appendix A**.
- 3.6.3 It should be noted that scores 6a and 6b are the two highest categories that can be achieved by the PTAL Assessment. Given the 'excellent' PTAL score it is clear that future employees of the proposed site will have access to an excellent range of public transport facilities which consequently support the development of the site as a car free scheme.

Figure 3.2: Public Transport Accessibility Levels

PTAL	Range of Index	Map Colour	Description
1a (Low)	0.01 - 2.50		Very poor
1b	2.51 - 5.00		Very poor
2	5.01 - 10.00		Poor
3	10.01 - 15.00		Moderate
4	15.01 - 20.00		Good
5	20.01 - 25.00		Very Good
6a	25.01 - 40.00		Excellent
6b (High)	40.01 +		Excellent



4.0 Aims, Objectives and Targets

4.1 Introduction

4.1.1 This chapter outlines the objectives and targets of the Framework Travel Plan for the proposed development.

4.2 Framework Travel Plan Aims

- 4.2.1 The main aims of this Travel Plan are as follows:
 - Increase awareness of the sustainable modes of transport available to employees;
 - Improve air quality and reduce emissions;
 - · Promote healthy lifestyles; and
 - Increase the number of journeys by sustainable modes.

4.3 Framework Travel Plan Objectives

- 4.3.1 The main objective of this Travel Plan is to promote travel by the more sustainable modes of transport, and to manage the overall transport impacts of the development.
- 4.3.2 Beneath this headline objective, several other travel related objectives have been identified as follows:
 - Objective 1: Promote walking / cycling and health and wellbeing;
 - Objective 2: Promote public transport; and
 - Objective 3: Provide information that is conducive towards promoting sustainable travel and changing travel behaviour.

4.4 Proposed Travel Context

4.4.1 **Table 4.1** shows the forecast multi-modal trip generation for the development proposal, based on the analysis set out within the WYG Transport Statement (2017).



Table 4.1 - Proposed Use - Multi Modal Trip Generation AM Peak PM Peak Mode Share % In Out Two Way In Out Two Way Underground 48% 37 3 43 5 42 46 Train 20% 16 1 18 2 17 19 Bus 16% 12 1 14 2 14 15								
			AM Peak		PM Peak			
		In	Out	Two Way	In	Out	Two Way	
Underground	48%	37	3	43	5	42	46	
Train	20%	16	1	18	2	17	19	
Bus	16%	12	1	14	2	14	15	
Bicycle	7%	5	0	6	1	6	7	
On foot	9%	7	0	8	1	8	9	
Total	100%	78	6	89	10	87	96	

4.4.2 **Table 4.1** shows that Bedford House is likely to generate 89 two way person trips in the AM peak period and 96 two way person trips in the PM peak period, when allowing for the additional floorspace proposed.

4.5 Framework Travel Plan Targets

- 4.5.1 Bedford House is a car free development and the analysis provided by the WYG Transport Statement (2017) forecast that 84% of future users will travel by public transport and 16% by walking and cycling.
- 4.5.2 This Travel Plan will therefore not set quantative targets as its arrangement is likely to already encourage sustainable travel, as driving to the site is not a feasible option. This Travel Plan will therefore target to:
 - Promote the efficient provision of sustainable travel information to assist future site users in their travel choices.
- 4.5.3 This will be delivered via a variety of Travel Plan measures, which are discussed within **Chapters 6** and **7**.



5.0 Framework Travel Plan Strategy and Responsibility

5.1 Introduction

5.1.1 One of the most important development aspects of achieving a sustainable development is ensuring that sustainable travel opportunities are in place at the outset. When new employees move in they should be advised of the alternative travel options so that regular travellers establish sustainable travel behaviour from the outset.

5.2 Travel Plan Strategy

- 5.2.1 The Travel Plan for the proposed development will be site specific with the choice of measures partly determined by the existing opportunities and constraints offered by the site.
- 5.2.2 The Travel Plan will be treated as a 'live' document, ever changing and evolving to best suit the needs of the development.
- 5.2.3 Occupiers will sign up to the principles of the Travel Plan as a condition for the leasehold agreement, and will therefore be responsible for implementing and managing the Travel Plan as part of the agreement. The developer will use reasonable endeavours to ensure that the Travel Plan is being appropriately implemented.

5.3 Travel Plan Responsibility

Occupier Travel Plan Coordinator

- 5.3.1 Occupiers will appoint a Travel Plan Coordinator (TPC) to oversee the Travel Plan. The appointment of a TPC is a key measure of the travel plan and is considered essential for the management and successful implementation of measures associated with the Travel Plan.
- 5.3.2 The role will likely be part time and taken on by an existing employee within the Occupiers company. Appropriate funding and time will be made available for the TPC to manage and coordinate the running of the Travel Plan to fulfil his / her role. As part of this role they will undertake the following:
 - Arrange for the measures set out in the plan are implemented;
 - Collect appropriate information and distribute it to employees;
 - Conduct iTRACE travel surveys and publish regular reports detailing progress towards targets;
 and



Provide reports/data available to the Council's Highway Officer.

5.4 Longer Term Management

Occupier Group

- 5.4.1 As the site becomes occupied, Occupiers will be encouraged to form / join the Occupier Group. The OG will provide a facility for Occupiers to engage and discuss the Travel Plan. It is envisaged that the OG will assist in promoting the Travel Plan in the long term ensuring a high level of participation.
- 5.4.2 The OG provides a facility for the Travel Plan to operate from a 'bottom up' initiative, taking the needs of Occupiers into consideration from the outset ensuring that the Travel Plan is meeting the needs of this new extension.
- 5.4.3 The OG will be promoted via a number of communication mechanisms with the aim that membership remains high and open to all throughout the lifespan of the Travel Plan.
- 5.4.4 Once the Travel Plan has been completed, it is envisaged that the OG will continue their role within the community as hopefully members will wish to continue to maintain the positive benefits which were delivered by the Travel Plan.
- 5.4.5 It is possible that a single employer may occupy the extension and in such circumstance the function of the OG will be undertaken by the identified TPC.



6.0 Framework Travel Plan Measures

6.1 Introduction

- 6.1.1 This Chapter outlines the measures which will be provided to promote sustainable travel choices amongst employees of Bedford House, together with new ways of organising activities to minimise the need to travel.
- 6.1.2 Travel planning measures and initiatives at the proposed development will be provided with the aim of meeting the specified targets. Details of these measures are outlined in the following sections of this chapter and summarised within the Action Plan (**Table 6.1**).

6.2 Staff Travel Plan Measures

Preoccupation Marketing

6.2.1 The developer will promote the principles of the Travel Plan to potential Occupiers and the requirements which will need to be met were the leasehold agreement to be signed. This will allow future Occupiers to find out what forms of sustainable travel will be readily available to them if they move in to the development and allow them to consider how to market the Travel Plan to future staff.

Staff Travel Pack

- 6.2.2 The developer will use reasonable endeavours to encourage future Occupiers to provide their staff a Staff Travel Pack (STP), to ensure that staff know what sustainable travel options are available when considering how to travel to and from the workplace.
- 6.2.3 A key driver in behavioural change and travel planning is to provide high quality information in a clear and concise way.
- 6.2.4 In order to supply information about sustainable travel options to the development in an accessible and convenient way, detailed travel packs will be produced and supplied to each employee upon at the hiring stage. The STP will likely contain:
 - Details of the Travel Plan measures, objectives and targets;
 - Contact details for the TPC;
 - Generalised public transport information for the local area;
 - Information of any cafes or lunch facilities;



- Maps on how to access areas by walking, cycling and public transport; and
- Promotional material on the benefits of active travel; and
- The promotion of sustainable travel events (e.g. BikeWeek).
- 6.2.5 The development of STPs is a crucial stage in the project process. It is essential that STPs contain the necessary balance of travel information and motivational messages to inform recipients to encourage them to travel sustainably.

Newsletter / Email

- 6.2.6 The developer will use reasonable endeavours to encourage the Occupier to provide a biannual newsletter during the active phase of the Travel Plan, which will detail the progress towards targets and the results of the monitoring. The newsletter will be provided in either a leaflet form or electronically and can be prepared by the TPC.
- 6.2.7 The newsletter will act as a promotion tool for the Travel Plan by publicising any new measures, national sustainable travel campaigns and improvements to sustainable travel facilities in the local area.

Travel Plan Website

- 6.2.8 The developer will use reasonable endeavours to encourage the Occupier to provide Travel Plan initiatives on their company website or staff intranet (if available). The website could outline site specific information, to encourage trips generated by the proposed development to be undertaken by sustainable travel.
- 6.2.9 The site could be actively marketed via several communication mechanisms (STP, newsletter, noticeboard) and will likely contain the following information:
 - Maps showing how to access the local and wider area by walking, cycling and public transport;
 - Information on active travel and the associated health benefits;
 - Contact details for the TPC; and
 - Provide a facility for on-going promotion of sustainable travel events.
- 6.2.10 It will be the responsibility of the TPC to ensure that the information contained on the website is relevant and up to date. It is considered that the provision of such a facility would enable visitors and staff to appropriately organise their travel to / from the site via sustainable modes.



Staff Meetings

6.2.11 The developer will use reasonable endeavours to encourage the Occupier to co-ordinate a meeting for staff to discuss the Travel Plan initiatives, procedures and results to ensure that staff fully engage with the Travel Plan. The meeting will most likely be chaired by the TPC and will likely occur once per year.

Noticeboard

- 6.2.12 The developer will use reasonable endeavours to encourage the Occupier to provide sustainable travel information on a noticeboard, located within an area which is highly trafficked by staff. The noticeboard could provide walking and cycling maps for the area as well as local public transport information. It can also be used as a facility to promote sustainable travel events / initiatives, the website.
- 6.2.13 It will be the responsibility of the TPC to ensure that the information contained on the board is relevant and up to date.

Promotion of Sustainable Transport

Walking

- 6.2.14 The developer will use reasonable endeavours to encourage the Occupier to promote travel by walking via a number of communication mechanism such as (but not limited to) the TPC, STP, noticeboard, staff meetings or website.
 - Maps identifying key pedestrian routes to key facilities;
 - Information promoting active travel and the associated health benefits of walking.

Cycling

- 6.2.15 The site will provide cycle parking spaces and their location will be promoted via a number of communication mechanism such as (but not limited to) the STP, noticeboard, staff meetings or website.
- 6.2.16 Shower and changing facilities will be provided to enable cyclists to 'freshen up' before their working day. The facility will be easily accessible within Bedford House and is considered a key feature in ensuring that cycling to work remains attractive in the long run.
- 6.2.17 The developer will use reasonable endeavours to encourage the Occupier to promote travel by cycling via a number of communication mechanism such as (but not limited to) the TPC, STP, noticeboard, staff meetings or website.



- Information promoting active travel and the associated health benefits of cycling;
- Provision of local cycle maps; and
- Safe cycling practice.

Public Transport

- 6.2.18 The developer will use reasonable endeavours to encourage the Occupier to promote travel by public transport via a number of communication mechanism such as (but not limited to) the TPC, STP, noticeboard, staff meetings or website.
 - Information promoting active travel and the associated health benefits of cycling;
 - Provision of local public transport maps and timetables; and
 - Promotion of key public transport websites (<u>www.traveline.info</u>).

Smarter Working Facilities

6.2.19 The developer will use reasonable endeavours to encourage the Occupier to provide / investigate the feasibility of providing smarter working facilities for employees. This can reduce off site trips and can be delivered using a range of facilities (such as tele-conferencing, video-conferencing, working from home, etc).

6.3 Visitor Travel Plan Measures

Email / Telecommunications

6.3.1 The developer will use reasonable endeavours to encourage the Occupier to promote to site visitors how the site can be accessed sustainably. This information could be provided over the phone or via email when arrangement a meetings. Occupiers could also provide links to their website which sets out the travel options for accessing the facility.

6.4 Action Plan

6.4.1 The Action Plan for the proposed development site is set out in **Table 6.1**.



	Table 6.1 - Local Bus Service	es	
Measure	Timeframe	Responsibility	Meet Objectives
	Staff Travel Plan Measures	1	
Cycle parking	Pre-occupation	Developer	1
Shower & Changing Facilities	Pre-occupation	Developer	1
Pre-occupation Marketing	Pre-occupation	Developer	1, 2, 3
Staff Travel Pack	At employment / Ongoing	Occupier / TPC	1, 2, 3
Newsletter / Email	Within 12 months / Ongoing	Occupier / TPC	1, 2, 3
Travel Plan Website	Within 12 months / Ongoing	Occupier / TPC	1, 2, 3
Staff Meetings	Within 12 months / Ongoing	Occupier / TPC	1, 2, 3
Noticeboard	Within 3 months / Ongoing	Occupier / TPC	1, 2, 3
Promotion of Sustainable Transport	Within 6 months / Ongoing	Occupier / TPC	1, 2, 3
Smarter Working Facilities	Within 3 months / Ongoing	Occupier / TPC	3
	Visitor Travel Plan Measure	s	
Email / Telecommunication	Within 3 months / Ongoing	Occupier / TPC	1, 2, 3
	Monitoring		
Monitoring Questionnaire	Within 9 months then annual for 5 years	TPC	-
Monitoring Report	Within 3 months following completion of survey	TPC	-



7.0 Implementation, Monitoring and Review

7.1 Introduction

7.1.1 This chapter sets out the implementation, monitoring and review process of the Travel Plan.

7.2 Implementation

- 7.2.1 A key aspect of the Travel Plan is the provision of travel information for site users. It will be the responsibility of the TPC to ensure that the strategy and proposed measures are implemented.
- 7.2.2 The TPC will prepare an Implementation Strategy Table to set out responsibilities and timescales for implementing and monitoring the progress of the initiatives proposed by the Travel Plan.
- 7.2.3 It will also be the role of the TPC to monitor and evaluate the impacts of the Travel Plan and report findings to the Travel Plan Officer at the Local Highway Authority.
- 7.2.4 It will be necessary to review the Travel Plan and associated initiatives following the full occupation of the site. Regular monitoring will ensure that progress towards meeting the Travel Plan objectives and targets is measured and will help to identify those areas of the Travel Plan that may not be working as well as planned at the time of writing, and conversely, those aspects which are performing better than expected.

7.3 Monitoring and Review

- 7.3.1 It is important to recognise that Travel Plans are live documents and as such develop over time with changing conditions. It will be necessary to review the Travel Plan and associated initiatives following full occupation of the extended building. Regular monitoring will ensure that progress towards meeting the Travel Plan objectives and targets is measured and will help identify those areas of the Travel Plan that may not be working particularly well, and conversely, those aspects which are performing better than expected.
- 7.3.2 This Travel Plan will be monitored for 5 years, with the first year commencing at 75% occupancy (for the entire building) following development. Reviews will be completed at the end of the first, third and fifth year of occupancy. A Monitoring Report will be prepared as part of this process which will be



submitted to the Council for approval. The report is likely to include:

- A statistical summary of the Modal Split of Employees/ Residents/ Users disclosed by the Monitoring Surveys;
- The progress of the Travel Plan in achieving targets and identifying any amendments to the Travel Plan to be agreed in writing by the Council in the event that targets as set out in the Travel Plan are not achieved;
- A plan for future actions to be implemented; and
- Provision of an iTRACE compliant travel survey and report.
- 7.3.3 The Occupier will commission the surveys when they are due using methodology approved by TfL and the Council. The company undertaking the surveys will inform the Council that they are carrying out the monitoring, and provide the results to the Council following data collection within a specified period of time.
- 7.3.4 Any discrepancy between the recorded modal splits and the progress towards the long term targets will be identified and discussed in details with the Highway Authority. This may require additional travel planning measures to be introduced should the modal splits be falling behind the targets set or alternatively the setting of new targets should progress be ahead of schedule.

8.0 Summary and Conclusion

8.1 Summary

- 8.1.1 This Framework Travel Plan sets out an overarching Framework Travel Plan strategy, setting out the aims and objectives for the proposed development. This Framework Travel Plan aims to reduce congestion, improve air quality and promote healthier lifestyles by increasing the number of people using sustainable modes of transport, when accessing the proposed development site.
- 8.1.2 This Framework Travel Plan provides a site specific package of measures which can be used to promote access by sustainable modes to / from the proposed development site and assist future users in organising sustainable travel journeys. It has been prepared to focus on the extended element of Bedford House but can be applied to the full building.
- 8.1.3 Management and monitoring of this Framework Travel Plan will be overseen by a TPC who will raise awareness of sustainable travel and promote the principles of the Travel Plan to future site employees.

8.2 Conclusion

8.2.1 This Framework Travel Plan outlines a package of measures with the ultimate aim of creating a transport environment which is pursuant towards encouraging sustainable travel and assisting future site users in organising their journeys.

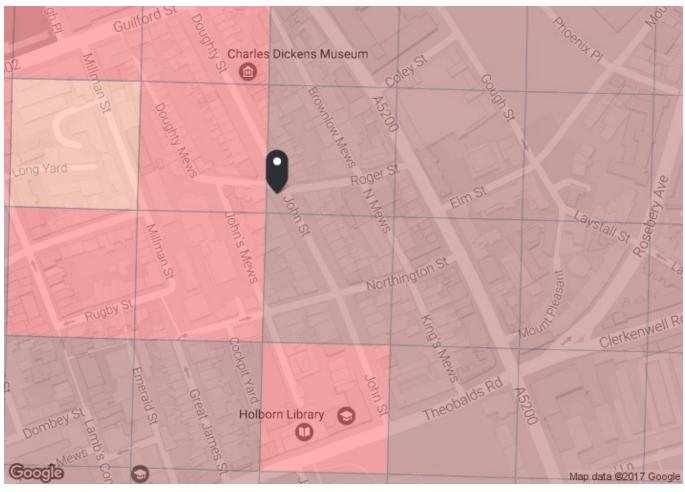


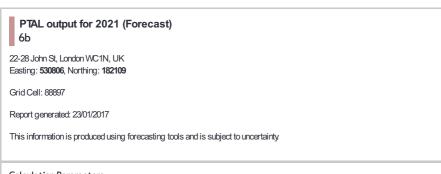
Appendices



Appendix A: PTAL Assessment







Calculation Parameters	
Dayof Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU ReliabilityFactor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail ReliabilityFactor	0.75



	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)		Weight	
lus	HOLBORN HALL	341	331.4	6.21	4.14	6.83	10.97	2.73		
us	HOLBORN HALL	243	256.89	11.38	3.21	4.64	7.85	3.82		
US	HOLBORN HALL	38	256.89	10.35	3.21	4.9	8.11	3.7	0.5	
us	HOLBORN HALL	19	256.89	8.28	3.21	5.62	8.83	3.4	0.5	
us	HOLBORN HALL	55	256.89	10.35	3.21	4.9	8.11	3.7	0.5	
us	GRAYS INN RD GUILFORD S	46	175.49	6.21	2.19	6.83	9.02	3.32	0.5	
Bus	GRAYS INN RD GUILFORD S	17	175.49	7.76	2.19	5.86	8.06	3.72	0.5	
Bus	GRAYS INN RD GUILFORD S	45	175.49	7.24	2.19	6.14	8.33	3.6	0.5	
Bus	MOUNT PLEASANT	63	512.94	12.42	6.41	4.42	10.83	2.77	0.5	
Rail	Farringdon Turnmill	'SHENFLD-PADTON'	864.76	7.33	10.81	4.84	15.65	1.92	0.5	
Rail	Farringdon Turnmill	'ABBEYW-PADTON'	864.76	7.33	10.81	4.84	15.65	1.92	1	
Rail	Farringdon Turnmill	'ABBEYW-HTRW4'	864.76	3.33	10.81	9.76	20.57	1.46	0.5	
Rail	Farringdon Turnmill	'SHENFLD-RDNGSTN'	864.76	2	10.81	15.75	26.56	1.13	0.5	
Rail	Farringdon Turnmill	'MDNHEAD-SHENFLD'	864.76	1.33	10.81	23.31	34.12	0.88	0.5	
Rail	Farringdon Turnmill	'HTRW4-SHENFLD'	864.76	1	10.81	30.75	41.56	0.72	0.5	
Rail	Farringdon Turnmill	'MDNHEAD-ABBEYW'	864.76	0.67	10.81	45.53	56.34	0.53	0.5	
Rail	Farringdon Turnmill	'PADTON-GIDEAPK'	864.76	1	10.81	30.75	41.56	0.72	0.5	
Rail	Farringdon Turnmill	'PADTON-WWARSL'	864.76	0.67	10.81	45.53	56.34	0.53	0.5	
Rail	Farringdon Turnmill	'WDRAYTN-ABBEYW'	864.76	1.33	10.81	23.31	34.12	0.88	0.5	
Rail	Farringdon Turnmill	'WDRAYTN-SHENFLD'	864.76	0.67	10.81	45.53	56.34	0.53	0.5	
Rail	Farringdon Turnmill	'RDNGSTN-ABBEYW'	864.76	0.33	10.81	91.66	102.47	0.29	0.5	
Rail	Farringdon Turnmill	'HTRW4-WWARSL'	864.76	0.33	10.81	91.66	102.47	0.29	0.5	
Rail	Farringdon Turnmill	'WELWYNGC-TATNHMC E13'	864.76	2	10.81	15.75	26.56	1.13	0.5	
Rail	Farringdon Turnmill	'TATNHMC-WELWYNGC S73'	864.76	2	10.81	15.75	26.56	1.13	0.5	
Rail	Farringdon Turnmill	'PBRO-THBDGS E19/20'	864.76	2	10.81	15.75	26.56	1.13	0.5	
Rail	Farringdon Turnmill	'THBDGS-PBRO S61/62'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'HORSHAM-CAMBDGE S63/'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'CAMBDGE-HORSHAM E21/'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'MSTONEE-CAMBDGE K81/'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'CAMBDGE-MSTONEE E23/'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'BEDFDM-ORPNGTN M7/8'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'ORPNGTN-BEDFDM K41/4'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'BEDFDM-EGRNSTD M9/10'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'EGRNSTD-BEDFDM S79/8'	864.76	2	10.81	15.75	26.56	1.13		
Rail		'BEDFDM-BRGHTN M11'	864.76	1	10.81	30.75	41.56			
	Farringdon Turnmill			•				0.72		
Rail	Farringdon Turnmill	'BRGHTN-BEDFDM S57'	864.76	1	10.81	30.75	41.56			
Rail	Farringdon Turnmill	'BEDFDM-BRGHTN M12'	864.76	1	10.81	30.75	41.56	0.72		
Rail	Farringdon Turnmill	'BRGHTN-BEDFDM S58'	864.76	1	10.81	30.75	41.56	0.72		
Rail	Farringdon Turnmill	'BEDFDM-BRGHTN M13/14'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'BRGHTN-BEDFDM S59/60'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'LUTON-DARTFD M15/16'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'DARTFD-LUTON K1/2'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'STALBCY-CATERHAM M19'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'CATERHAM-STALBCY S71'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'LUTON-SUTTON'	864.76	2	10.81	15.75	26.56	1.13		
Rail	Farringdon Turnmill	'SUTTON-LUTON'	864.76	2	10.81	15.75	26.56	1.13	0.5	
Rail	Farringdon Turnmill	'STALBCY-SUTTON'	864.76	2	10.81	15.75	26.56	1.13	0.5	
Rail	Farringdon Turnmill	'SUTTON-STALBCY'	864.76	2	10.81	15.75	26.56	1.13	0.5	
.UL	Farringdon Turnmill	'Edgware-Hammersmith'	864.76	8	10.81	4.5	15.31	1.96	0.5	
UL	Farringdon Turnmill	'Hammersmith-Edgware'	864.76	8	10.81	4.5	15.31	1.96	0.5	
UL	Farringdon Turnmill	'Barking-Hammersmith'	864.76	8	10.81	4.5	15.31	1.96	0.5	
UL	Farringdon Turnmill	'Hammersmith-Barking'	864.76	8	10.81	4.5	15.31	1.96	0.5	
.UL	Farringdon Turnmill	'AMRSHM-ALDGT F'	864.76	2	10.81	15.75	26.56	1.13	0.5	
UL	Farringdon Turnmill	'AMRSHM-ALDGT SF'	864.76	2	10.81	15.75	26.56	1.13	0.5	
UL	Farringdon Turnmill	'ALDGT-AMRSHMS'	864.76	4	10.81	8.25	19.06	1.57	0.5	
UL	Farringdon Turnmill	'CHSHM-ALDGT F'	864.76	2	10.81	15.75	26.56	1.13		
UL	Farringdon Turnmill	'ALDGT-CHSHMS'	864.76	2	10.81	15.75	26.56	1.13		
UL	Farringdon Turnmill	'UXBRDG-ALDGT SF'	864.76	2	10.81	15.75	26.56	1.13		

/lode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	A
UL	Farringdon Turnmill	'ALDGT-UXBRDGS'	864.76	6	10.81	5.75	16.56	1.81	0.5	0.9
UL	Farringdon Turnmill	'ALDGT-WATFDJS'	864.76	4	10.81	8.25	19.06	1.57	0.5	0.7
.UL	Chancery Lane	'Epping-Ealing '	688.06	3	8.6	10.75	19.35	1.55	0.5	0.7
UL	Chancery Lane	'WRuislip-Epping '	688.06	3	8.6	10.75	19.35	1.55	0.5	0.7
.UL	Chancery Lane	'RuislipGar-Epping'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
UL	ChanceryLane	'WhiteCity-Epping '	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.1
LUL	ChanceryLane	'Epping-NActon'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
LUL	ChanceryLane	'Northolt-Epping '	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
LUL	ChanceryLane	'Debden-WRuislip'	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.1
LUL	Chancery Lane	'WhiteCity-Debden'	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.1
LUL	Chancery Lane	'Debden-Northolt'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
LUL	Chancery Lane	'RuislipGdns-Debden'	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.1
LUL	Chancery Lane	'Loughton-WRuislip'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
LUL	ChanceryLane	'NActon-Loughton'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
UL	Chancery Lane	'RuislipGdns-Loughton'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
LUL	ChanceryLane	'Loughton-WhiteCity'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
UL	Chancery Lane	'Loughton-Northolt'	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.
LUL	Chancery Lane	'Ealing-Loughton'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
LUL	Chancery Lane	'Ealing-NewburyPark'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
LUL	Chancery Lane	'WRuislip-NewburyPark'	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.1
LUL	Chancery Lane	'NActon-NewburyPark'	688.06	0.33	8.6	91.66	100.26	0.3	0.5	0.
LUL	Chancery Lane	'Hainault-Ealing '	688.06	5.33	8.6	6.38	14.98	2	1	2
LUL	Chancery Lane	'Hainault-Nacton'	688.06	1.33	8.6	23.31	31.91	0.94	0.5	0.4
LUL	Chancery Lane	'Hainault-WRuislip'	688.06	3.33	8.6	9.76	18.36	1.63	0.5	0.8
LUL	Chancery Lane	'RuislipGdns-NP-Hain'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
LUL	Chancery Lane	'WhiteCity-Hainault'	688.06	1.67	8.6	18.71	27.31	1.1	0.5	0.5
LUL	Chancery Lane	'Hainault-NP-Northolt'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
LUL	Chancery Lane	'GrangeHill-WD-Eal'	688.06	1	8.6	30.75	39.35	0.76	0.5	0.3
LUL	Chancery Lane	'GrangeHill-Wdfd-Whit'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
LUL	Chancery Lane	'GrangeHill-Wdfd-WRsp'	688.06	0.67	8.6	45.53	54.13	0.55	0.5	0.2
LUL	Russel Square	'Cockfosters-LHRT4LT'	798.35	4.67	9.98	7.17	17.15	1.75	0.5	0.8
LUL	Russel Square	'RayLane-Cockfosters'	798.35	3.67	9.98	8.92	18.9	1.59	0.5	0.7
LUL	Russel Square	'LHRT4LT-ArnosGrove'	798.35	4.67	9.98	7.17	17.15	1.75	0.5	0.8
LUL	Russel Square	'ArnosGrove-RayLane'	798.35	0.33	9.98	91.66	101.64	0.3	0.5	0.1
LUL	Russel Square	'ArnosGrove-Nthfields'	798.35	3	9.98	10.75	20.73	1.45	0.5	0.7
LUL	Russel Square	'Oakwood-RayLane'	798.35	0.33	9.98	91.66	101.64	0.3	0.5	0.1
LUL	Russel Square	'Nthfields-Cockfoster'	798.35	1	9.98	30.75	40.73	0.74	0.5	0.3
LUL	Russel Square	'LHRT5-Cockfosters'	798.35	6	9.98	5.75	15.73	1.91	0.5	0.9
LUL	Russel Square	'Uxbridge-Cockfosters'	798.35	3.67	9.98	8.92	18.9	1.59	0.5	0.7
LUL	Russel Square	'Ruislip-Cockfosters'	798.35	2.33	9.98	13.63	23.6	1.27	0.5	0.6
LUL	Russel Square	'ArnosGrove-Uxbridge'	798.35	1	9.98	30.75	40.73	0.74		0.3
_UL	Russel Square	'Oakwood-Uxbridge'	798.35	0.33	9.98	91.66	101.64	0.3	0.5	0.1
LUL	Russel Square	'Oakwood-Ruislip'	798.35	0.33	9.98	91.66	101.64	0.3	0.5	0.1
									Total Grid Cell Al:	65.