6.1 Introduction

6.1.1 As Merthyr Tydfil's built environment changes through development and regeneration, there continues to be opportunities to plan and design areas in ways that reduce the need to travel and ensure the effective use of more sustainable modes of transport. The benefits of this include reducing the emission of greenhouse gases, improving the health of the local population, increasing social inclusion and cutting the costs of congestion.

6.1.2 The following sections consider some of the key elements involved in influencing sustainable travel patterns[9].

6.2 Layout and Connectivity

6.2.1 People's travel choices are significantly influenced by the layout of a development and its links with surrounding street networks. In general terms, layouts should provide direct routes, be permeable and connect well to surrounding routes in order to offer the greatest opportunities for walking, cycling and travel by public transport.

6.2.2 The chosen layout and connection points of a new development should be informed by the findings of a contextual appraisal which considers the range of facilities and services in the neighbourhood; existing public transport services; public rights of way and cycle routes; and travel desire lines through and around the site. The findings can then inform decisions on how best the site can connect into the wider movement network and how best to arrange the movement structure of the development proposal.

6.2.3 As part of this process, it is important to consider how to create an inclusive built environment which meets the needs of all people regardless of age or ability. New developments should provide equal and convenient access for all potential users, including disabled people, older people, children and families. Routes should be kept as near to level as possible along their length and width as this will benefit wheelchair and pram users. A legible layout will also make it easier for people with sensory or cognitive impairment to work out where they are and where they are going.

6.2.4 The perimeter block layout can help provide a pedestrian friendly design solution which integrates well with the neighbourhood. It connects existing and proposed streets and provides direct, convenient routes to local facilities, community infrastructure and bus stops. In contrast, typical cul-de-sac style

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9   *Please note that the parking standards applied in Merthyr Tydfil can be found in the document entitled "CCS Wales – Wales Parking Standards 2008".*

developments produce introverted layouts which lack connectivity with its surroundings. The result of this is convoluted, illegible routes which are less convenient for the pedestrian and cyclist and encourage short car trips.

6.2.5 It should be recognised that highly permeable layouts can lead to anti-social behaviour if they are only achieved through the provision of footpaths and cycleways that are poorly overlooked, such as those routed to the rear of buildings. Superfluous access points and routes should be avoided.

6.3 Density

6.3.1 Higher densities should be considered for development sites that are well served and connected to local facilities and public transport services. The aim should not be to achieve a defined residential density, but to create a critical mass of users that will secure the long term viability of facilities and services. Development sites within Merthyr Tydfil's town and local centres are likely to offer the greatest opportunity for delivering higher densities.

6.4 Walking and Cycling

6.4.1 Developments should seek to deliver convenient, safe and attractive pedestrian and cycling routes that encourage people to choose walking as the prime means for local journeys and cycling as a substitute for shorter car journeys. To achieve this, careful consideration needs to be given to the location, access arrangements and design of new developments.

6.4.2 It is preferable that cars, pedestrians and cyclists share the same route as people feel safer on streets where there is natural surveillance from drivers, residents and other users. However, to create a safer environment for pedestrians and cyclists, streets need to be designed for low traffic speeds (ideally 20mph or less) and detailed design measures need to be implemented which address junctions, desire lines and road crossings, surfacing, lighting and road calming. Home zones are an

effective means of creating a truly shared street where no single use dominates. They also have the additional benefits of fostering community interaction, promoting a sense of ownership of the street and reinforcing the sense of place.

6.4.3 Pedestrian and cycle-only links can be acceptable if they provide a more direct route than the road and are designed well. Such links should be wide, open, short, well overlooked by buildings and barrier free. They should also clearly demarcate between cycling and pedestrian paths to prevent conflict between different users. Narrow routes enclosed by tall, blank elevations should be avoided as they create a sense of claustrophobia and insecurity for the user. Such routes are likely to be poorly used and can attract antisocial behaviour.

Figure 6.1   A "cyclepod" providing space efficient bicycle storage in a residential garden.

6.4.4 Developments also need to incorporate a number of additional facilities which support cycling as a preferred means of transport. Residential developments should provide bicycle storage which is both convenient for everyday use and secure (see Figure 6.1). Other major travel generating uses and transport interchanges should provide secure bicycle parking as well as shower and changing facilities (see Figure 6.2). The latter facilities are important for encouraging cycling as part of longer journeys, particularly when combined with public transport.

Figure 6.2 Bus stop and bicycle parking provided at the Keir Hardie Health Park.

6.5 **Public Transport**

6.5.1   A key element of creating connections between new and old development is the integration of public transport. Bus-based public transport is the most common mode serving residential areas in Merthyr Tydfil and improvements to services and/or infrastructure should be considered as part of new developments, where appropriate.

6.5.2   The choice of routes and location of stops are important factors in achieving walkable neighbourhoods. Routes need to follow principal roads and streets which pass through the area's core. Stops should be located where activity is concentrated, near specific destinations or near road junctions. Bus stops must be easily accessed by foot and bicycle.