

APPENDIX A

SITE COVERAGE ASSUMPTIONS AND OCCUPANCY RATES

Site Coverage Assumptions

- Retail: 0.66
- Industrial: 0.4
- Warehousing: 0.3
- Office: 0.7

Occupancy Rates

- Retailing: 1 no. employee per 50 sq m
- Industry: 1 no. employee per 50 sq m
- Warehousing: 1 no. employee per 100 sq m
- Office: 1 no. employee per 32.5 sq m

APPENDIX B

KILDARE TRANSPORT MANAGEMENT OBJECTIVES

Kildare Transport Management Objectives

Notes:

1. Transport Management objectives should be read in conjunction with Figure 9.4, 9.5, 9.6 etc
2. All objectives subject to incorporate implementation of co-ordinated regulatory and information signage and lining

| Obj: | Location | Measures |
|----------------------------|---|--|
| Short Term Measures | | |
| S1 | N7 Dublin Road: West and east of town boundary | <p>Vehicular:</p> <ul style="list-style-type: none"> • Introduce Gateway features on the N7 to alert drivers that they are entering an urban area. Sensitive design required incorporating street furniture, hard and soft landscaping, contrasting surface textures, higher level of signing and road markings etc |
| S2 | R413 Newbridge Road and R415 Milltown/Nurney Road: town boundary sites | <p>Vehicular:</p> <ul style="list-style-type: none"> • Install smaller scale entry features at existing speed limit locations advising motorists that they are entering an urban area, Gateway feature less intrusive than S1 |
| S3 | Rathbride Road: Residential developments to north of town to the Rail Station | <p>Pedestrians & Cyclists:</p> <ul style="list-style-type: none"> • Construct cycle track and footpath on the west side of Rathbride Road linking to Rail Station. Include for construction of Cantilever or freestanding pedestrian/cyclist bridge adjacent existing rail bridge to provide pedestrians with a safe route to the rail station and town centre. |
| S4 | Town Centre Sites | <p>Pedestrians</p> <p>Detailed below are a number of roads within the town centre which require the retrofitting of footpaths to provide safe passage for pedestrians:</p> <ul style="list-style-type: none"> • Station Road: Melita Road to the Rail Station • Priests Lane outside Vocational School • White Abbey Road • Academy Street • Meadow Road |
| S5 | Town Centre Sites | <p>Pedestrians</p> <p>Detailed below are a number of roads within the town centre which require extending footpaths to appropriate widths:</p> <ul style="list-style-type: none"> • Nugent Road • Priests Lane • Academy Street |

| Obj: | Location | Measures |
|-----------------------------|--|--|
| Medium Term Measures | | |
| M1 | Town Centre: Market Square and Claregate Street. | <p>Pedestrians:</p> <ul style="list-style-type: none"> Main Town Centre thoroughfare to be pedestrian prioritised with vehicular access restricted to 2 way bus, taxi and cycle use only. Provision to be made for delivery vehicles with possible permit system. <p>Public Transport:</p> <ul style="list-style-type: none"> Shared surface to be constructed along extent of pedestrianized zone. Bus access route to be 5.5m wide (widths to be reviewed in full design) and demarcated by bollards/street furniture. Bus stops and quality waiting area to remain in vicinity of Market Square. <p>Cyclists:</p> <ul style="list-style-type: none"> Provide cycle parking facilities at Market Square. <p>Vehicular:</p> <ul style="list-style-type: none"> Redesign Claregate Street/Academy Street junction to ensure pedestrian provision. Provide raised table junction to reduce vehicular speeds and improve pedestrian safety. <p>Parking:</p> <ul style="list-style-type: none"> Removal of parking at Market Square and convert to landscaped seating area. This would increase pedestrian safety by removing excess vehicular movements and provide an attractive focal point. Parking provision to be made for people with disabilities. |
| M2 | Lanes between the Cathedral and Claregate Street | <p>Pedestrians:</p> <ul style="list-style-type: none"> In line with the pedestrianisation of Market Square and Claregate Street, town centre back lanes e.g. Heffernan's Lane to be pedestrianized. This would increase pedestrian safety by removing vehicular traffic and help rejuvenate the area. |
| M3 | St Brigid's Square: Academy Street | <p>Vehicular:</p> <ul style="list-style-type: none"> Rationalise road configuration in vicinity of St Brigid's Square by Closing off Academy Street between Grey Abbey Road and St Brigid's Square. <p>School</p> <ul style="list-style-type: none"> Section of closed off road to be converted to a safe bus set down area for pupils attending St Brigid's National School and St Joseph's Academy. |
| M4 | Scoil na mainstreach De La Salle. | <p>School:</p> <ul style="list-style-type: none"> Provide formal set down area for buses and cars on Bride Street outside Scoil na mainstreach De La Salle. . |
| M5 | Green Road/ South Green Road/ Old Road | <p>Vehicular:</p> <ul style="list-style-type: none"> In line with the proposals to develop South Green (Phase 1) and due to available road widths, |

| Obj: | Location | Measures |
|------|--------------------------|--|
| | | consider introducing 1 way system northbound along Green Road and Southbound along South Green Road and Old Road. Need for circulatory system would be reviewed when/if the north west outer relief road is constructed. |
| M6 | Town Routes | <p>Cyclists: Detailed below are a number of proposed cycle routes to be introduced on existing roads within the town. Depending on the vehicular flows and available road space, the cycle routes may be segregated or non-segregated. Further cycle friendly traffic calming measures may be introduced to reduce vehicular speeds on specific routes.</p> <ul style="list-style-type: none"> • Old N7: Curragh Road, Hospital Street, Dublin Street, Claregate Street • Academy Street, Grey Abbey Road • Bride Street/Tully Road • In Line with South Green Development: DunMurry Road, Old Road, Green Road and South Green Road • Bothairin Na gCorp • Shraud, Melitta Road |
| M7 | Future Development Sites | <p>Pedestrians/Cyclists Detailed below are a number of proposed footway/cycle tracks to be constructed in line with the development of future residential, commercial, and employments sites or future road proposals.</p> <ul style="list-style-type: none"> • Footway cycle track linking Hospital Street to Melitta Road through the Magee Barracks site • Footway Cycle track following the alignment of the eastern outer relief road. (To be developed in tandem with relief road, therefore medium to Long term objective) • Footway cycle track linking Melitta Street to Station Road through the proposed high density employment site to the east of the rail station. Route requires construction of a slow mode bridge over the existing rail line. • Footway cycle track running parallel to the Rail line linking South Green to the Rail Station. Route requires upgraded pedestrian friendly measures at existing link into rail station from the north. • Footway Cycle track following the alignment of the southern relief route relief road. Cycle links to be developed into adjacent commercial and employment sites. (To be developed in tandem with southern relief road, therefore medium to Long term objective) • Footway/Cycle track linking Old Road into Fire Castle Lane via the proposed car park site |
| M8 | Town Centre Sites | Parking: |

| Obj: | Location | Measures |
|--|---|--|
| | | <ul style="list-style-type: none"> Provide additional off street parking on the periphery of the town centre cell. Potential locations include: <ol style="list-style-type: none"> South West corner McGee Barracks Site North East corner of Action Area Plan 3 Claremore Road Meadow Road |
| M9 | Dunmurry Road/ Railway line crossing. | Vehicular/Pedestrians/Cyclists: <ul style="list-style-type: none"> Extension of culvert under the railway line on Dunmurry Road to facilitate 2way pedestrian, cyclists and vehicular traffic in order to formalise access into the South Green Development, the existing housing areas and the proposed new schools. |
| Long Term Measures: (Major Infrastructure Improvements) | | |
| L1 | Eastern relief route | Vehicular: <ul style="list-style-type: none"> Construction of eastern relief route from the N7 to R415 Milltown Road. Route to provide eastern bypass of the town centre and access to the residential, employment and commercial developments to the east and north of the town. |
| L2 | Southern relief route | Vehicular: <ul style="list-style-type: none"> Construction of southern relief route from the N7 Hospital Street to N7 Monasterevin Road, Road to provide local bypass of the town centre and access to the commercial and employment centres to the south and west of the town. |
| L3 | South Green Link Road | Vehicular: <ul style="list-style-type: none"> Local access road to be constructed through centre of the South Green Development (Stage 1) linking Green Road to Old Road. |
| L4 | Mcgee Barracks site and eastern residential developments. | Vehicular: <p>Local access routes to be constructed from the eastern relief route, R413 and the N7 to link into the McGee Barracks site and eastern residential developments. Routes to provide local access only.</p> |

APPENDIX C
MONASTEREVIN TRANSPORT MANAGEMENT
OBJECTIVES

Monasterevin Transport Management Objectives

Notes:

1. Transport Management objectives should be read in conjunction with Figure 9.9, 9.10 etc.
2. All objectives subject to incorporate implementation of co-ordinated regulatory and information signage and lining

| Obj: | Location | Measures |
|--|--|---|
| Short Term Measures | | |
| S1 | N7 Dublin Road: West and east of town boundary | Vehicular: <ul style="list-style-type: none"> Introduce Gateway features on the N7 to alert drivers that they are entering an urban area. Sensitive design required incorporating street furniture, hard and soft landscaping, contrasting surface textures, higher level of signing and road markings etc |
| S2 | R414 Rathangan Road: town boundary site | Vehicular: <ul style="list-style-type: none"> Install smaller scale entry feature at existing speed limit location advising motorists that they are entering an urban area, Gateway feature less intrusive than S1 |
| S3 | Harbour View to Rail Station | Pedestrians: <ul style="list-style-type: none"> Construct footpath on the east side of Harbour View to ensure a continuous pedestrian link is provided from the Town Centre to the Rail Station. The construction of a one sided footpath under the rail bridge will reduce the road width to one lane only. Introduce traffic signals or priority to one direction. |
| S4 | River Barrow Grand Canal | Pedestrians/Cyclists: <ul style="list-style-type: none"> Upgrade/reinforce footpath links along the River Barrow and Grand Canal to provide attractive leisure routes. |
| S5 | Town extents | Pedestrians: <ul style="list-style-type: none"> Undertake audit of existing footpath facilities in the town, interalia footpath widths, state of repair, crossing points with particular emphasis on provision for disabled access throughout the town |
| Medium Term Measures (Post Monasterevin Bypass) | | |
| M1 | N7: Athy Road junction to Grand Canal | Pedestrians: <ul style="list-style-type: none"> On completion of the M7 bypass, reassign the road space on the Dublin Road to improve the streetscape. Introduce wide pedestrian areas with planting and street furniture. Redesign junction at Main Street and Drogheda Street to ensure pedestrian friendly. Provide controlled or uncontrolled pedestrian crossings at each junction. |

| Obj: | Location | Measures |
|------|---------------------------------|---|
| | | <p>Cyclists:</p> <ul style="list-style-type: none"> • Install on road cycle lanes along the extent of the route segregated from vehicular traffic by solid white line and coloured surfacing. • Provide cycle parking facilities at Market Square. <p>Vehicular:</p> <ul style="list-style-type: none"> • Traffic speeds on the Dublin Road to be reduced by the redistribution of the road space. Vehicular speeds to be reviewed to determine the need for additional traffic calming measures. <p>Public Transport:</p> <ul style="list-style-type: none"> • Provide quality bus waiting areas at the existing locations adjacent Market Square and east of Drogheda Street junction <p>Parking:</p> <ul style="list-style-type: none"> • Inset parking to be provided in the redesign of the streetscape. • All day parking to be discouraged. Consider one hour parking limit. |
| M2 | Main Street and Drogheda Street | <p>Pedestrians:</p> <ul style="list-style-type: none"> • Maintain wide aspect of street, but reassign road space to provide a more pedestrian friendly streetscape. Widen Pedestrian areas and introduce planting and seating areas. • Provide controlled or uncontrolled pedestrian crossing facilities outside the schools. <p>Cyclists:</p> <ul style="list-style-type: none"> • Install on road cycle lanes along the extent of the route segregated from vehicular traffic by solid white line and coloured surfacing. • Provide cycle parking facilities at strategic points along the route e.g. junction with Whelan Street. . <p>Vehicular:</p> <ul style="list-style-type: none"> • Traffic speeds on Main Street and Drogheda Street to be reduced by the redistribution of the road space. Vehicular speeds to be reviewed to determine the need for additional traffic calming measures. <p>Parking:</p> <ul style="list-style-type: none"> • Inset parking to be provided in the redesign of the streetscape. |
| M3 | Eastern link to Rail Station | <p>Pedestrians/Cyclists:</p> <ul style="list-style-type: none"> • Create southern access to the railway station to link existing and proposed residential sites to the south east of the railway line to the station. |
| M4 | Hulk Site Development | <p>Pedestrians/Cyclists:</p> <ul style="list-style-type: none"> • In line with the future development of the Hulk Site, Construct a footway/cycle track link from the site |

| Obj: | Location | Measures |
|------|------------------|--|
| | | to the midpoint of Main Street. Route requires the construction of a slow mode bridge over the River Barrow. |
| M5 | Moore Abbey Site | <p>Pedestrians/Cyclists:</p> <ul style="list-style-type: none"> • In line with the partial development proposals of the Moore Abbey site construct a footway cycle track through the proposed residential development from the R417 Athy Road to Dublin Road. • Various pedestrian access points will also be required onto the N7 from this route. |
| M6 | Town Routes | <p>Cyclists:</p> <p>In addition to the routes already identified, detailed below are a number of proposed cycle routes to be introduced on existing roads within the town. Depending on the vehicular flows and available road space, the cycle routes may be segregated or non-segregated. Further cycle friendly traffic calming measures may be introduced to reduce vehicular speeds on specific routes.</p> <ul style="list-style-type: none"> • Whelan Street • Rathangan Road • Togher/Cow Pasture • Athy Road • Harbour View |

APPENDIX D

TRANSPORT MODEL OUTPUTS

Table D1: Global SATURN and MEPLAN Statistics

Meplan Modal Split by Purpose: Internal trips

| | | 2002 | 2016 | |
|-----------|-------------------|-------------|------------|------------------------------|
| | | Present Day | Do Minimum | All future road improvements |
| Work | Car | 83% | 76% | 54% |
| | Sustainable Modes | 17% | 24% | 46% |
| Education | Car | 73% | 71% | 47% |
| | Sustainable Modes | 27% | 29% | 53% |
| Shopping | Car | 74% | 70% | 47% |
| | Sustainable Modes | 26% | 30% | 53% |
| Other | Car | 61% | 59% | 44% |
| | Sustainable Modes | 39% | 41% | 56% |
| Global | Car | 74% | 71% | 49% |
| | Sustainable Modes | 26% | 29% | 51% |

Global Saturn Statistics

| | | 2002 | 2016 | |
|---------------------------|---------------------------------|-------------|------------|------------------------------|
| | | Present Day | Do Minimum | All future road improvements |
| Total Number of Car Trips | | 3716 | 11,223 | 9822 |
| Simulation Network | Total Travel Time (pcu/hrs) | 389 | 1065 | 748 |
| | Total Travel Distance (pcu kms) | 24,368 | 52,928 | 50,480 |
| | Average Speed (km/hr) | 62.6 | 49.7 | 67.5 |

Table D2: SATURN Assigned Traffic Flows AM Peak

| Loc | Direction and Way | | 2002 | | | 2016 | | | | | | |
|-----------------------|--|---|--------------------|-------------|------------|---------------------|-------------|------------|-----------------------|-------------|------------|---|
| | | | Base Year Scenario | | | Do Minimum Scenario | | | All Road Improvements | | | |
| | | | Demand Flow | Actual Flow | Queue Flow | Demand Flow | Actual Flow | Queue Flow | Demand Flow | Actual Flow | Queue Flow | |
| Old N7 | 1 | Curragh Road: Eastern Town Boundary | W | 641 | 641 | 0 | 155 | 155 | 0 | 134 | 134 | 0 |
| | | E | 661 | 661 | 0 | 242 | 237 | 5 | 128 | 128 | 0 | |
| | 2 | Curragh Road: between French Furtze Road and the Stud | W | 628 | 628 | 0 | 360 | 360 | 0 | 139 | 139 | 0 |
| | | | E | 761 | 761 | 0 | 660 | 630 | 30 | 202 | 202 | 0 |
| | 3 | Dublin Street: between Meadow Road and Bride Street | W | 707 | 707 | 0 | 834 | 803 | 31 | 233 | 233 | 0 |
| | | | E | 949 | 949 | 0 | 926 | 858 | 68 | 201 | 201 | 0 |
| | 4 | Claregate Street: East of White Abbey Road | W | 630 | 630 | 0 | 584 | 558 | 26 | | | 0 |
| E | | | 696 | 696 | 0 | 620 | 576 | 44 | | | 0 | |
| 5 | Claregate St: Between White Abbey Road and Pigeon Street | W | 619 | 619 | 0 | 885 | 846 | 39 | 503 | 503 | 0 | |
| | | E | 749 | 749 | 0 | 761 | 697 | 64 | 242 | 240 | 2 | |
| 6 | Claregate Street: Between Pigeon Street and M7 link Road | W | 642 | 642 | 0 | 737 | 689 | 48 | 633 | 633 | 0 | |
| | | E | 660 | 660 | 0 | 679 | 650 | 29 | 564 | 555 | 9 | |
| 7 | Old N7: Western Town Boundary | W | 621 | 621 | 0 | 295 | 282 | 13 | 149 | 148 | 1 | |
| | | E | 689 | 689 | 0 | 271 | 271 | 0 | 102 | 102 | 0 | |
| R415 | 8 | Melitta Road | W | 210 | 210 | 0 | 443 | 443 | 0 | 395 | 395 | 0 |
| | | | E | 219 | 219 | 0 | 801 | 693 | 108 | 625 | 624 | 1 |
| | 9 | Grey Abbey Road south of St Brigids Square | E | 267 | 267 | 0 | 15 | 15 | 0 | 5 | 5 | 0 |
| | | | W | 432 | 432 | 0 | 15 | 15 | 0 | 4 | 4 | 0 |
| | 10 | Bride Street | N | 144 | 144 | 0 | 243 | 241 | 2 | 523 | 521 | 2 |
| | | | S | 151 | 151 | 0 | 209 | 194 | 15 | 319 | 319 | 0 |
| 11 | Station Road: South of Melitta Road | N | 224 | 224 | 0 | 676 | 650 | 26 | 526 | 526 | 0 | |
| | | S | 347 | 347 | 0 | 621 | 571 | 50 | 292 | 292 | 0 | |
| 12 | Rathbride Road: Railway Crossing | N | 124 | 124 | 0 | 514 | 473 | 41 | 441 | 441 | 0 | |
| | | S | 112 | 112 | 0 | 387 | 386 | 1 | 391 | 390 | 1 | |
| R401 | 13 | Shraud Road: Between Dunmurry Rd and Station Rd | W | 111 | 111 | 0 | 485 | 475 | 10 | 568 | 568 | 0 |
| | | | E | 140 | 140 | 0 | 350 | 229 | 121 | 500 | 498 | 2 |
| | 14 | Dunmurry Road: Railway Crossing | N | 103 | 103 | 0 | 372 | 360 | 12 | 539 | 538 | 1 |
| S | | | 202 | 202 | 0 | 1021 | 1021 | 0 | 772 | 772 | 0 | |
| South Green Area | 15 | Old Road: Railway Crossing | N | 13 | 13 | 0 | 453 | 430 | 23 | 346 | 339 | 7 |
| | | | S | 36 | 36 | 0 | 743 | 743 | 0 | 557 | 557 | 0 |
| | 16 | South Geen Road: Railway Crossing | N | 8 | 8 | 0 | 336 | 300 | 36 | 226 | 224 | 2 |
| S | | | 13 | 13 | 0 | 88 | 88 | 0 | 95 | 95 | 0 | |
| 17 | Green Road | N | 31 | 31 | 0 | 405 | 375 | 30 | 322 | 317 | 5 | |
| | | S | 47 | 47 | 0 | 128 | 128 | 0 | 112 | 112 | 0 | |
| Town Centre Links | 18 | Pigeon Lane | N | 14 | 14 | 0 | 646 | 619 | 27 | 590 | 583 | 7 |
| | | | S | 152 | 152 | 0 | 581 | 509 | 72 | 397 | 397 | 0 |
| | 19 | Meadow Road | W | 59 | 59 | 0 | 153 | 146 | 7 | 29 | 29 | 0 |
| | | | E | 110 | 110 | 0 | 253 | 247 | 6 | 60 | 60 | 0 |
| | 20 | Academy Street: South of Claregate Street | N | 72 | 72 | 0 | 188 | 187 | 1 | 274 | 274 | 0 |
| | | | S | 147 | 147 | 0 | 47 | 43 | 4 | 184 | 181 | 3 |
| 21 | White Abbey Road | N | 119 | 119 | 0 | 313 | 229 | 84 | 98 | 98 | 0 | |
| | | S | 137 | 137 | 0 | 151 | 132 | 19 | 270 | 270 | 0 | |
| M7/M7 Link Road | 22 | M7 East of Interchange | W | | | | 1845 | 1845 | 0 | 1937 | 1937 | 0 |
| | | | E | | | | 1868 | 1828 | 40 | 1935 | 1935 | 0 |
| | 23 | M7 West of Interchange | W | | | | 1664 | 1661 | 3 | 1668 | 1668 | 0 |
| | | | E | | | | 1394 | 1394 | 0 | 1393 | 1393 | 0 |
| 24 | M7 Link Road: South of Development Lands Access Rd | N | | | | 260 | 257 | 3 | 445 | 445 | 0 | |
| | | S | | | | 789 | 764 | 25 | 911 | 911 | 0 | |
| 25 | M7 Link Road: South of old N7 | N | | | | 289 | 289 | 0 | 290 | 290 | 0 | |
| | | S | | | | 666 | 639 | 27 | 437 | 437 | 0 | |
| Eastern Relief Route | 26 | Between Curragh Rd and Melitta Rd | N | | | | | | | 148 | 148 | 0 |
| | | | S | | | | | | | 191 | 191 | 0 |
| 27 | Between Melitta Rd and Rathbride Road | N | | | | | | | 186 | 186 | 0 | |
| | | S | | | | | | | 82 | 82 | 0 | |
| South Green Link Road | 28 | Between Dunmurry Road and Old Road | W | | | | | | | 19 | 19 | 0 |
| | | | E | | | | | | | 3 | 3 | 0 |
| | 29 | Between Old Road and South Green Road | W | | | | | | | 39 | 38 | 1 |
| | | | E | | | | | | | 18 | 18 | 0 |
| 30 | Between South Green Road and Green Road | W | | | | | | | 1 | 1 | 0 | |
| | | E | | | | | | | 0 | 0 | 0 | |
| Southern Relief Route | 31 | Between Hospital Street and Tully Road | W | | | | | | | 256 | 256 | 0 |
| | | | E | | | | | | | 311 | 311 | 0 |
| | 32 | Between Tully Road and Grey Abbey Road | W | | | | | | | 287 | 287 | 0 |
| | | | E | | | | | | 517 | 517 | 0 | |

Fig. D1 Kildare Assignment Flows Location Map

