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# M4 Corridor around Newport

## Non-Motorised Users Context Report



Welsh Government

**M4 Corridor around Newport  
Non-Motorised Users Context  
Report**

M4CaN-DJV-HGN-ZG\_GEN-RP-TR-0005

| March 2016

# Contents

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	Page	
<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Scheme Description</b>	<b>4</b>
<b>3</b>	<b>Policy Context</b>	<b>9</b>
<b>4</b>	<b>Non-Motorised User Activity</b>	<b>24</b>
<b>5</b>	<b>Vehicle Flows</b>	<b>29</b>
<b>6</b>	<b>Public Transport</b>	<b>36</b>
<b>7</b>	<b>Accident Data</b>	<b>38</b>
<b>8</b>	<b>Development Proposals of Relevance</b>	<b>46</b>
<b>9</b>	<b>Public Rights of Way Network</b>	<b>47</b>
<b>10</b>	<b>Trip Generators</b>	<b>52</b>
<b>11</b>	<b>Desire Lines</b>	<b>53</b>
<b>12</b>	<b>Conflict Points</b>	<b>55</b>
<b>13</b>	<b>Views of User Groups and Other Interested Parties</b>	<b>58</b>
<b>14</b>	<b>Non-Motorised Users Scheme Objectives</b>	<b>77</b>
<b>15</b>	<b>Summary and Next Steps</b>	<b>80</b>
<b>16</b>	<b>References</b>	<b>82</b>

## Appendices

### Appendix A

Non-Motorised Users Themed Context Plan: Accidents and Vehicle Speeds

### Appendix B

Non-Motorised Users NMU Themed Context Plan: Trip Generators, Desire Lines and Public Rights of Way

### Appendix C

Non-Motorised Users Themed Context Plan: Non-Motorised Users Flows

**Appendix D**

NMU Themed Context Plan: Vehicle Flow Data

**Appendix E**

Plan of Scheme Objectives for NMUs

**Appendix F**

Bus Operator's Timetables

**Appendix G**

Rail Operator's Timetables

**Appendix H**

Summary of Developments of Relevance

**Appendix I**

Public Walking and Cycling Maps

# 1 Introduction

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## 1.1 Context

**1.1.1** The Welsh Government has awarded a Professional Services Contract for the next stage of Scheme development and environmental surveys for the M4 Corridor around Newport (“The Scheme”) up to publication of draft Orders and an Environmental Statement. The contract has been awarded to a Joint Venture of Costain, Vinci and Taylor Woodrow with consultants Arup and Atkins, supported by sub-consultant RPS. The team shall be developing proposals in anticipation of publishing draft Orders and an Environmental Statement in spring 2016 and a Public Local Inquiry later that year. This process will then inform the next stage of Ministerial decision making.

**1.1.2** Since 1989 there have been various studies to identify the problems and propose possible solutions. The M4CAN WelTAG Stage 1 (Strategy Level) Appraisal concluded that a new section of 3-lane motorway to the south of Newport following a protected (TR111) route, in addition to complementary measures, would best achieve the goals and address the problems of the M4CAN and should be progressed for further appraisal. These options have subsequently formed the basis for the development of the draft Plan, which was published in September 2013 and was the subject of public consultation from September to December 2013.

**1.1.3** Having taken into account the responses to this participation process, as well as the assessments of the draft Plan, the Welsh Government has decided to publish a Plan for the M4CAN. Alongside this Plan, the Welsh Government has published updated strategy-level reports, including a Strategic Environmental Assessment Statement, to demonstrate how the participation process has informed its decision making. It also announced in July 2014 a revised preferred route, which will protect a corridor for planning purposes. These documents can be accessed from the website <http://m4newport.com>.

## 1.2 Scheme objectives and reason for the scheme

**1.2.1** As a result of consultation and previous development workshops, problems have been identified and aims and objectives have been set for the M4 CaN. The aims are to:

- a) Make it easier and safer for people to access their homes, workplaces and services by walking, cycling, public transport or road.
- b) Deliver a more efficient and sustainable transport network supporting and encouraging long-term prosperity in the region, across Wales, and enabling access to international markets.
- c) To produce positive effects overall on people and the environment, making a positive contribution to the over-arching Welsh Government goals to reduce greenhouse gas emissions and to making Wales more resilient to the effects of climate change.

**1.2.2** The scheme aims to help to achieve or facilitate these aims as part of a wider transport strategy for South East Wales, as outlined within the Prioritised National Transport Plan.

**1.2.3** The Welsh Government has identified 15 Transport Planning Objectives (TPOs) which aim to address the identified transport related problems. They are to help achieve:

TPO 1: Safer, easier and more reliable travel east-west in South Wales.

TPO 2: Improved transport connections within Wales and to England, the Republic of Ireland and the rest of Europe on all modes on the international transport network.

TPO 3: More effective and integrated use of alternatives to the M4, including other parts of the transport network and other modes of transport for local and strategic journeys around Newport.

TPO 4: Best possible use of the existing M4, local road network and other transport networks.

TPO 5: More reliable journey times along the M4 Corridor.

TPO 6: Increased level of choice for all people making journeys within the transport Corridor by all modes between Magor and Castleton, commensurate with demand for alternatives.

TPO 7: Improved safety on the M4 Corridor between Magor and Castleton.

TPO 8: Improved air quality in areas next to the M4 around Newport.

TPO 9: Reduced disturbance to people from high noise levels, from all transport modes and traffic within the M4 Corridor.

TPO 10: Reduced greenhouse gas emissions per vehicle and/or person kilometre.

TPO 11: Improved travel experience into South Wales along the M4 Corridor.

TPO 12: An M4 attractive for strategic journeys that discourages local traffic use.

TPO 13: Improved traffic management in and around Newport on the M4 Corridor.

TPO 14: Easier access to local key services and residential and commercial centres.

TPO 15: A cultural shift in travel behaviour towards more sustainable choices.

## **1.3 Purpose of the Report**

**1.3.1** This Non-Motorised User (NMU) Context Report has been prepared, following the DMRB standard HD 42/05, as a statement of background information on current or potential NMU issues relevant to the scheme. NMUs are generally considered to be pedestrians, cyclists and equestrians.

**1.3.2** The report is intended to ensure the Design Team have the necessary information to take appropriate decisions on design elements that may affect NMUs. The report uses the background information to set out a framework of scheme specific NMu objectives. The report also proposes a timetable for the completion of NMu Audits, which will report upon the progress of the scheme against the objectives set out and identify issues for NMUs, in particular consideration of the needs of disabled people, who may be using any of the three primary modes, and/or specialist equipment such as wheelchairs.

**1.3.3** This report has been prepared using information available at the time of preparation. Therefore, the contents of this report may need to be revisited and updated during future scheme stages. Such reasons for updates may be following further consultation, or publication of new information, or changes to the scheme. In accordance with HD 42/05, updates to the NMu Context Report will be included within the relevant Audit Report(s), unless agreed or instructed otherwise by Welsh Government.

## **1.4 Methodology**

**1.4.1** This report has been prepared in accordance with the requirements of DMRB standard HD 42/05, including:

- a) Appraisal of existing data relating to NMUs, including accident records;
- b) Consideration of existing traffic data, including flows and speeds;
- c) Consideration of forecast traffic flow data;
- d) Consideration of developments;
- e) Identification of trip generators and desire lines;
- f) Consultation with stakeholders; and
- g) Proposing Scheme Objectives for NMUs.

## 2 Scheme Description

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**2.1.1** The Welsh Ministers proposed the M4CaN Project (the “Scheme”), comprising:

- a) A new section of motorway between Junctions 23 and 29 south of Newport; alongside
- b) Complementary measures, including:
  - i. Improvements to safety, access arrangements and our ability to manage traffic by reclassifying the existing M4 between Magor and Castleton as a trunk road;
  - ii. Relief to Junction 23A, the local road network and access to the proposed park and ride facilities at Severn Tunnel junction railway station with a new M4/M48/B4245 connection; and
  - iii. Provide cycle and walking friendly infrastructure.

**2.1.2** For the purposes of identifying geographic locations, the scheme has been divided into six distinct areas as follows (west to east):

1. Castleton Interchange;
2. Wentlooge Levels;
3. Usk Viaduct;
4. Magor Levels;
5. Magor Interchange; and
6. Reclassified Existing M4 and A48(M).

**2.1.3** A summary of the scheme within each of the identified zones is provided below.

## 2.2 Castleton Interchange

**2.2.1** The Castleton Interchange would form the most western part of the scheme, where the proposed section of motorway would connect into the existing M4 route.

**2.2.2** The proposed new section motorway would tie into the existing M4 to the east of the Druidstone Road overbridge, just to the west of the existing New Park Farm footbridge (FP 400/2, FP 400/10 and FP 400/11). At this point, the proposed motorway would enter the Castleton Interchange, connecting with the reclassified existing M4 and the reclassified existing A48(M). Both the existing M4 and A48(M) would be reclassified as all-purpose trunk roads. The roads would be connected via free-flow slip roads, providing an elongated two level interchange in the space to the north of the existing A48 Cardiff Road, to the east of Castleton Village. The existing Pound Hill overbridge would be crossed by the proposed section of motorway and stopped up accordingly. The existing A48 Cardiff Road would be spanned by two structures, one carrying a link road to connect the proposed section of motorway with the existing A48(M). The second would carry the proposed motorway.



**2.2.3** The proposed new section of motorway would continue from the Castleton Interchange on a south-easterly alignment. The route would be spanned by a new overbridge carrying Church Road, and would occupy the footprint of the existing Duffryn Link. The route would continue across Percoed Reen, which runs parallel to the proposed Cardiff-Newport Cycle Link, and would rise up to cross over the South Wales Main Line railway route. Green Lane would be truncated by the proposed new section of motorway some 150m north of the South Wales Mainline to London.

## **2.3 Wentlooge Levels**

**2.3.1** After crossing over the South Wales to London Mainline, the proposed new section of motorway would continue on a north-easterly alignment, and is spanned by an overbridge carrying the B4239 Lighthouse Road. To the east of the Lighthouse Road, the route would cross the existing Wales Coast Path (FP 412/11), running along Heol Pont y Cwcu. The proposed new section of motorway would continue north east, and west-facing slip roads would join/leave the road to connect the proposed Docks Way Junction, to the east of the River Ebbw. These slip roads, and the motorway would cross the River Ebbw.

## **2.4 Newport Docks and River Usk Crossing**

**2.4.1** After crossing the River Ebbw, the proposed new section of motorway would run above a proposed roundabout, which would form part of the Docks Way Junction. A link road would be provided connecting this roundabout to the local road network at the A48 Southern Distributor Road. The proposed alignment continues east on an elevated structure and the east facing slip roads from the Docks Way Junction would join/leave the mainline. The proposed new section of motorway would continue on an elevated structure, crossing the Port of Newport, above the connection between its North Dock and South Dock, and would curve around to span the River Usk on an east-west alignment. After the River Usk crossing, the elevated structure would terminate to the east of the spanned Uskmouth Railway with the proposed new section of motorway to continue towards the Caldicot Levels.

## **2.5 Caldicot Levels**

**2.5.1** At the end of the elevated structure, the proposed new section of motorway would run in a south-easterly direction, occupying the existing footprint of National Cycle Network Route 4 and the Wales Coast Path (FP 401/4). Nash Road would cross the proposed route on a corridor realigned to the east of its current position, and the existing road would be stopped up where it is not required to be retained for access. The route would continue on a north-easterly alignment to the proposed Glan Llyn Junction, which would be located to tie into an existing roundabout on the A4810. The proposed junction and the roundabout on the A4810 would be connected by a dual carriageway link road.

**2.5.2** From the Glan Llyn Junction, the proposed route would continue on an east-west alignment through the Llanwern Steelworks site, passing to the north of an existing substation, but to the south of the existing waste lagoons. The proposed new section of motorway would be crossed by North Row, which would be

realigned across an overbridge, to tie into the Tata Steel access roundabout on the A4810.

- 2.5.3** From North Row, the proposed route would follow around to the northeast, and continue near parallel to the existing A4810 alignment, running towards Bareland Street, which would be crossed via an underbridge.

## **2.6 Magor Interchange**

- 2.6.1** The proposed motorway would continue on a near south-north alignment running parallel to the A4810 to cross the South Wales to London Mainline and Green Moor Lane, via an underbridge. After crossing Green Moor Lane, the route would curve around towards the east, passing beneath an overbridge carrying what would be a realigned B4245 Newport Road. The B4245 Newport Road would be diverted to the north of its present alignment and would intersect with the A4810 via an at-grade roundabout.

- 2.6.2** The proposed new section of motorway would tie into the existing M4 route slightly to the east of the existing Junction 23A, following an east-west alignment. At the point of tie-in, the existing M4 route (which would be reclassified as an all-purpose trunk road) would be diverted offline to follow a proposed all-purpose two lane dual carriageway alignment, running parallel and to the north of the existing M4 route. Where St Brides Road, Mill Reen (FP 372/12), Vinegar Hill Knollbury Lane and The Elms cross the existing motorway, the connections would be maintained with retained, new or extended structures. The proposed dual carriageway alignment would connect with the M48 via an at-grade signalised roundabout junction.

- 2.6.3** The existing M4 route alignment runs southeast towards the Second Severn Crossing, and at this location there would be a new arrangement at Junction 23, which forms the most eastern part of the scheme. The proposed arrangement at Junction 23 would comprise a new large signalised roundabout connecting the realigned, reclassified existing M4, the M48, the B4245, the eastbound diverge and merge slip roads for the M4 and the merge slip road for the westbound M4. The westbound diverge from the M4 would connect with the westbound reclassified existing M4 via a free flow link, and directly to the B4245 at a proposed signalised junction to the east of Undy. The B4245 would be connected with the new signalised gyratory with the M48 via a roundabout sited near to Llanfihangel.

## **2.7 Reclassified Existing M4 and A48(M) and Remodelled Junction 25**

- 2.7.1** As part of the scheme, the existing M4 route and A48(M) would be reclassified to become all-purpose trunk roads. This section describes the overall geometry, junction arrangements and route crossings (including those for NMUs) that form part of the existing route, starting from the west and moving eastwards.

- 2.7.2** The A48(M) commences at the St Mellons Junction (29A), where the A48 diverges (and merges) to follow its corridor through Castleton village to Newport. The current A48(M) has motorway status, but the reclassified road would make it an all-purpose trunk road. The A48(M) runs towards the existing M4 Junction 29

(Castleton Interchange), and this is the location where the Reclassified M4 and A48(M) interface with the proposed motorway at its western end.

- 2.7.3** Along the length of the A48(M) there are three locations where highways or rights of way cross the road. There is the Tyla Lane overbridge, the Coal Pit Lane overbridge, and a combined footpath/farm crossing via an underpass (FP 400/9). Along the length of the motorway, crossing footpaths are collected onto longitudinal footpaths (FP 400/71, FP 400/68 and FP 399/9), which connect the three crossing points. Seven different perpendicular rights of way (FP 399/8, FP 399/6, and FP400/65) intersect these longitudinal footpaths.
- 2.7.4** The Castleton Interchange is described above.
- 2.7.5** To the east of the proposed Castleton Interchange, the existing M4 route continues on an approximately east-west alignment towards Junction 28 (Tredegar Park), where the existing M4 intersects with the A48 and A467, which serve western Newport and routes to Caerphilly, Brynmawr and Tredegar. Between the Castleton Interchange and Junction 28, there is a single underpass. A number of footpaths (FP 390/2, FP 390/4 and FP 390/6) to the north of the existing motorway connect at this underpass, which also provides an NMU link to Blacksmith's Way to the south of the existing M4 and Church Lane to the south of the A48. There is also a private means of access crossing the existing M4 in the vicinity of Cleppa Park.
- 2.7.6** Junction 28, which is currently planned to be improved as a part of a separate project by Welsh Government, is traversed by National Cycle Network Route 4, and a number of footway connections provided alongside the local road network. There is also an underpass connecting Tredegar Park recreation ground to the southeast, and the former Tredegar Park golf course area to the northwest. A local cycle route and a designated footpath (FP 391/1) also cross these areas.
- 2.7.7** Between Junction 28 and Junction 27, the existing M4 runs in an approximately south-north direction as it passes through two bends. The existing M4 is crossed by two roads, namely Bassaleg Road and Glasllwch Lane. The Western Valley Railway, connecting Ebbw Vale to Cardiff and Newport, crosses the existing M4 in this area. Junction 27 is a local connection to the B4591, which connects Crosskeys, Risca and High Cross to Newport.
- 2.7.8** Between Junction 27 and Junction 26, there are three connections crossing the existing M4. One serves the Crumlin arm of the Monmouthshire and Brecon canal, which also conveys National Cycle Network Route 47, a footpath (FP 406/37) and permissive bridleway. The Sirhowy Valley Walk also crosses the existing M4 at this location. The second is a farm underpass serving Wern Ddu farm, which also conveys bridleway (BW 384/14) across the existing M4. The third connection comprises the Brecon arm of the Monmouthshire and Brecon Canal, which carries National Cycle Network Route 49 and footpath (FP 408/6).
- 2.7.9** Junction 26 is a connection to the A4051 Malpas Road, connecting Newport and Cwmbran. The roundabout is part time signalised on two arms (the A4051 southbound and the existing M4 westbound diverge slip road). There is a painted subsidiary left turn lane connecting the existing M4 eastbound with the A4051 northbound towards Cwmbran. The roundabout benefits from few pedestrian facilities, with only a small underpass located underneath the east facing slip roads.

- 2.7.10** The existing M4 route continues to the east through the Brynglas Tunnels, which pass beneath the Brynglas residential area and the A4042 Malpas Relief Road, before emerging and crossing the River Usk as it passes through the double junction layout of Junction 25 and Junction 25A. A Complementary Measure would involve remodelling this junction arrangement from its existing layout to provide west-facing slip road connections between the existing M4 and Junction 25. This would remove the direct existing M4 connections currently provided for Junction 25A, which would connect to Junction 25 to gain access to the existing M4 route.
- 2.7.11** Through the length of Junction 25 and Junction 25A, the existing M4 crosses National Cycle Network Route 88 and a footpath (FP 407/1), which runs under the elevated section across the River Usk; the Glebelands, which is connected via an underpass; Stockton Road, which is crossed via an underpass; and the B4596 Caerleon Road, which is connected to Junction 25. This section of the existing M4 has a distinct urban characteristic, with development adjacent to the existing M4 route boundaries. The existing M4 route then runs southeast, up St Julians Hill, passing beneath Firbank Avenue and Rembrandt Way. The route also crosses a footpath that runs through a subway connecting Constable Drive to Hogarth Close. The existing M4 is on a viaduct crossing St Julians Park, including a footpath (FP 389/49) running north from Christchurch Road towards the River Usk.
- 2.7.12** East of St Julians Park the existing M4 is spanned by a footbridge, which provides access to some allotments along a footpath (FP 385/1), before passing beneath Christchurch Road. The route then runs in a north-easterly direction towards Junction 24, passing beneath three further bridge structures linking a footpath connection to the north of the existing M4 (FP 405/1), B4236 Royal Oak Hill and the Celtic Manor Access Road.
- 2.7.13** At Junction 24, the existing M4 passes above a busy roundabout carriageway linked to the main carriageway via slip roads. Junction 24 connects the A449, the A48 Southern Distributor Road, A48 Chepstow Road and the B4237 Chepstow Road. Junction 24 benefits from a network of combined foot and cycleways, which are connected via toucan crossings at some of the junction signals. There are no NMU connections to the A449, although there are no restrictions for users accessing the A449.
- 2.7.14** The existing M4 continues to the east on a near east-west trending alignment. The road crosses Langstone Court Road, accessing Llanwern village, via an underbridge. A footpath (FP 394/75) crosses through an underpass before the route crosses Waltwood Road, accessing Underwood, via an overbridge. The existing M4 then crosses the B4245 Newport Road via an underbridge. The route then continues to Junction 23A of the existing M4, which connects via slip roads and a roundabout with the A4810 and the Magor Motorway Service area. Junction 23A intersects with a footpath (FP 372/69) that traverses it.
- 2.7.15** On the eastern side of Junction 23A, the existing M4 would be diverted to the north, along the proposed J23 to J23A trunk road link, as described above.

## 3 Policy Context

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### 3.1 Overview

**3.1.1** This section provides an overview of policies and plans, relevant to NMUs within the vicinity of the scheme. This includes consideration of overarching national and regional policies, together with the local planning and transport plan policies of Newport City Council, Monmouthshire County Council and Cardiff Council.

### 3.2 National Policy

#### **People, Places, Futures – The Wales Spatial Plan (2008)**

**3.2.1** The Wales Spatial Plan (WSP) was updated in 2008 and provides the ‘overarching framework and integration tool for Wales’. It underpins the future improvement of regional and national strategic planning for transport.

**3.2.2** The WSP prioritises the need for a fully integrated high quality transport system, and states "measures to alleviate congestion around Newport, and investment to tackle bottlenecks on other parts of the M4 are essential".

**3.2.3** There are five guiding themes which set out the National Framework. The key themes are based on:

- a) Building sustainable communities;
- b) Promoting a sustainable economy;
- c) Valuing our environment;
- d) Achieving sustainable accessibility; and
- e) Respecting distinctiveness.

**3.2.4** Among the key challenges identified within the WSP is to integrate sustainable transport solutions with community and development planning to improve accessibility.

#### **Wales Transport Strategy – One Wales: Connecting the Nation (2008)**

**3.2.5** The stated goal of the Wales Transport Strategy is “to promote sustainable transport networks that safeguard the environment while strengthening our country’s economic and social life.”

**3.2.6** Four main regions in Wales are identified and represented by a regional transport consortium, created through partnerships between neighbouring Local Authorities. The M4 around Newport falls within the South East Wales (The Capital Network) area.

**3.2.7** The transport strategy identifies a series of high-level sustainable transport themes and sets out the steps to their delivery, including:

- Achieving a more effective and efficient transport system;
- Achieving greater use of the more sustainable and healthy forms of travel; and
- Minimising demands on the transport system.

**3.2.8** The Strategy also outlines the Welsh Government's aspiration to reduce the impact of transport on greenhouse gas emissions.

**3.2.9** A set of specific long term outcomes are identified to enable transport to contribute to economic, social and cultural life. In relation to this report these include:

- Outcome 4: Healthy lifestyles – encouraging healthy lifestyles by higher levels of walking and cycling.
- Outcome 5: Safety and security of travel – improving the actual and perceived safety of travel by reducing injury accident rates as well as perceived safety for all modes of transport.
- Outcome 8: Reliable transport system by improving the efficient, reliable and sustainable movement of people.
- Outcome 10: Visitor attractions, green spaces and the countryside by providing people with the opportunity to access the countryside and key visitor attractions, including modal choice.

### **National Transport Plan (2010)**

**3.2.10** The National Transport Plan sets out what Wales should deliver over the next five years, set within the context of Wales' long-term vision as set out in One Wales. The plan identifies national and regional interventions, and recognises the role of local authorities in identifying priorities for transport investment at a local level to support the outcomes in the Wales Transport Strategy and in line with guidance provided by Welsh Government through their Local Transport Plans. Specific interventions that relate to NMUs include:

- a) Increase more healthy and sustainable travel;
- b) Develop a larger number of traffic free walking and cycling routes and segregated public transport routes;
- c) Maintain the Safe Routes in Communities programme to develop safer walking and cycling opportunities;
- d) Deliver Walking and Cycling Action Plan targets;
- e) Continue to increase the amount of funding available for walking and cycling;
- f) Improvements in the provision of safer walking and cycling routes;
- g) Continue to work with UK Government on development of the new Road Safety Strategy; and
- h) Address road safety in areas where casualty and fatality rates are higher than the national average, or where there are issues for vulnerable groups.

**3.2.11** In December 2014 a draft National Transport Plan 2015 was published for consultation. The National Transport Finance Plan was subsequently published in July 2015, following consultation responses received in support of a streamlined plan with greater focus on supporting the re focusing of the plan to provide the timescales, budgets and likely sources of financing for schemes being undertaken by Welsh Government. A delivery schedule is provided and under new road schemes to be constructed R8 is included and described as: "Improvements to the M4 Corridor around Newport - a new section of motorway south of Newport and complementary measures including; reclassification of the existing M4 between Magor and Castleton, a M48-B4245 link and cycling and walking friendly infrastructure".

### **Road Safety Framework for Wales (2013)**

- 3.2.12** This supersedes the Road Safety Strategy, which successfully achieved and exceeded the targeted reductions in casualties for all road users in Wales in 2010.
- 3.2.13** The 2013 framework sets out the Welsh Government's priorities for road safety and focuses on casualty reduction targets. Compared to the averages for 2004-2008 its targets are:
- 40% reduction in the total number of people killed and seriously injured on Welsh roads by 2020;
  - 25% reduction in the number of motorcyclists killed and seriously injured on Welsh roads by 2020; and
  - 40% reduction in the number of young people (aged 16-24) killed and seriously injured on Welsh roads by 2020.

### **Active Travel (Wales) Act (2013) and Active Travel Action Plan (2014)**

- 3.2.14** The Active Travel (Wales) Act gained royal assent in 4 November 2013. It legislates for the provision of travel routes designed for cycling and walking and in particular makes provision -
- a) for approved maps of existing active travel routes and related facilities in a local authority's area;
  - b) for approved integrated network maps of the new and improved active travel routes and related facilities needed to create integrated networks of active travel routes and related facilities in a local authority's area;
  - c) requiring local authorities to have regard to integrated network maps in preparing transport policies and to secure that there are new and improved active travel routes and related facilities;
  - d) requiring the Welsh Ministers to report on active travel in Wales;
  - e) requiring the Welsh Ministers and local authorities, in the performance of functions under the Highways Act 1980, to take reasonable steps to enhance the provision made for walkers and cyclists and to have regard to the needs of walkers and cyclists in the exercise of certain other functions, and
  - f) requiring the Welsh Ministers and local authorities to exercise their functions under the Act so as to promote active travel journeys and secure new and improved active travel routes and related facilities.
- 3.2.15** The Act created new duties for local authorities in Wales and the Welsh Ministers. It also gives the Welsh Ministers the power to issue guidance on the location, nature and condition of active travel routes and facilities to ensure they are suitable for use. Such guidance has been published in the form of guidance notes.
- 3.2.16** Both Newport City Council and Monmouthshire County Council have addressed the requirements of the Act in their respective statutory Local Transport Plans (LTPs).
- 3.2.17** Welsh ministers have identified those built-up areas with a population greater than 2,000 people in which the Active Travel Act will apply and within the Newport unitary authority area three settlement areas are named: Marshfield; Newport; and Caerleon.

- 3.2.18** Newport City Council has begun to consider the requirements of the new duties through the development of the Newport Active Travel Network Study 2014, further details of which are provided in Chapter 14 (All Travellers).
- 3.2.19** In Monmouthshire the following settlement areas are named: Undy, Caldicot, Chepstow, Usk, Monmouth, Abergavenny and Gilwern.
- 3.2.20** The Design Guidance relating to the Active Travel (Wales) Act 2013 sets out guidance for those involved in the planning, design, approval, construction and maintenance of Active Travel routes and associated facilities in Wales. This aims to inform the development of a network of walking and cycling routes that serve a variety of purposes and connect key locations such as workplaces, hospitals, schools and shopping areas.
- 3.2.21** The Design Guidance document is intended to ensure that the requirements of the Active Travel Act are applied consistently and appropriately. Advice in the guidance must be considered when designing active travel routes on trunk roads. Since active travel modes are not permitted on a motorway, the active travel Design Guidance would primarily influence the M4 Corridor around Newport scheme by informing the design of crossings and related NMU facilities. Where designers consider that compliance with the advice contained in this design guidance would conflict with a mandatory clause in the DMRB, this should be addressed through the Welsh Government's departures process.
- 3.2.22** For all non-trunk road networks, the Design Guidance must be considered by local authorities when designing active travel routes even where this conflicts with the current local authority design standards.

#### **Planning Policy Wales, Edition 8(2016)**

- 3.2.23** Planning Policy Wales (PPW8) sets out the land use planning policies of the Welsh Government. It seeks to promote resource efficient settlement patterns that minimise land take and urban sprawl, especially through preferences for the full and effective re-use of previously developed land and buildings.
- 3.2.24** Section 8 of PPW8 refers to the Welsh government's aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change by encouraging a more effective and efficient transport system, with greater use of the more sustainable and healthy forms of travel and minimising the need to travel. Paragraph 8.1.1 of PPW8 states that this will be achieved through integration:
- within and between different types of transport;
  - between transport measures and land use planning;
  - between transport measures and policies to protect and improve the environment; and
  - between transport measures and policies for education, health, social inclusion and wealth creation.
- 3.2.25** The main change between PPW8 and the previous version of Planning Policy Wales published in July 2014 (PPW7) is that Chapter 4 (Planning for Sustainability) has been updated to take into account the Well-being of Future Generations (Wales) Act 2015 and that Chapter 8 (Transport) has been updated to take into account the Active Travel (Wales) Act 2013.



**3.2.26** With respect to the Well-being of Future Generations (Wales) Act 2015 the amendments insert information on the provisions of the Act, including the seven well-being goals and the sustainable development principle. The description of legislative requirements for sustainable development in the planning system has also been updated. The changes also illustrate how the Welsh Government's planning policy objectives link to the well-being goals.

**3.2.27** TAN 16 'Sport, Recreation and Open Space' (2009) provides technical guidance in relation to sport, recreation and open space to supplement policy set out in PPW. In relation to public rights of way, the contribution of safe footpaths and cycle routes is highlighted, as is the need to protect and maintain these recreational and tourist resources.

### **Wales Infrastructure Investment Plan (2012)**

**3.2.28** The Wales Infrastructure Investment Plan for Growth and Jobs (WIIP) is designed to prioritise, scope and coordinate delivery of the Welsh Government's major infrastructure investments, whilst improving the long-term economic, social and environmental wellbeing of people and communities in Wales.

**3.2.29** High level investment priorities are set out and include: "Improving transport links, particularly East-West transport links in both North and South Wales – East-West links have already been prioritised in the National Transport Plan. In addition, larger projects are being examined for feasibility including the strategic enhancement of the M4". The Annual Report and Project Pipeline 2015 includes the project, setting out that it is "due to start on site in 2018 subject to successful completion of statutory procedures" and provides an update that the Welsh Government can: "access £500 million of direct borrowing, of which the Welsh Government has already announced its intention to use up to £400 million to support the M4 Corridor around Newport."

**3.2.30** In addition, also included in the WWP is the Phase 1 of a new and potentially transformational scheme to create a South East Wales metro system through better bus, rail and walking/cycling links, and a Strategic Cycle Network Development Programme.

## **3.3 Regional Policy**

### **A Cardiff Capital Region Metro Update Report (2014)**

**3.3.1** The Welsh Government is exploring how the public transport system in south east Wales can best meet its future challenges. Following the publication of the Metro Impact Study in October 2013, the Minister for Economy Science and Transport commissioned further work to identify next steps in making the Metro a reality. The 2014 update report sets out the vision for the Cardiff Capital Region Metro and the next steps for delivery. The initial schemes include rail infrastructure improvements, station upgrades, park and ride schemes, improving bus routes and introducing walking and cycling schemes.

### 3.3.2 The Metro update report provides useful context for its region:

- a) The Cardiff Capital Region comprises a population of over 1.4 million and extends beyond the administrative boundary of Cardiff to include the following unitary authorities: Blaenau Gwent, Bridgend, Caerphilly, Merthyr Tydfil, Monmouthshire, Newport, Rhondda Cynon Taf, Torfaen and the Vale of Glamorgan.
- b) The Cardiff Capital Region is committed to a low carbon future, which has a transport network and mobility culture that positively contributes to a thriving economy and the health and wellbeing of its citizens, and where sustainable travel is the option of choice. To achieve this, the Cardiff Capital Region requires policies and measures to address the current environmental, social and economic challenges. In particular, an estimated 24% increase in Cardiff's population during the next 25 years will result in a 32% net increase in traffic levels and a 20% increase in the number of residents commuting to work. This can be contrasted with the disparities in income, health and economic activity that exist in the northern parts of the Cardiff Capital Region.
- c) Tens of thousands of journeys start and finish in the Cardiff Capital Region every day, presenting a huge and diverse challenge to meet the many competing transport demands. Although central Cardiff presents the single most concentrated location for these journeys, it is recognised that a large number of movements also take place across the Cardiff Capital Region, and for a wide range of purposes.

#### **The Regional Transport Plan (2010)**

**3.3.3** Sewta was the alliance of 10 local authorities in South East Wales charged with preparing and co-ordinating regional transport policies, plans and programmes on behalf of its constituent councils. A Regional Transport Plan (RTP) was produced by Sewta and published in March 2010. The main aim of the RTP is to improve regional transport in South East Wales and to help deliver the social, economic and environmental objectives of the Wales Spatial Plan and the Wales Transport Strategy.

**3.3.4** During the last five years Sewta has further developed many aspects of its proposals. These include development of a Regional Rail Strategy, a Bus and Community Transport Regional Network Strategy, a Regional Bus Infrastructure and Corridor Investment Strategy, a Bus/Rail Integration Study, an Interchange Audit, an Interchange Walking, Cycling and Signage Audit, a Make-Better-Use Highways Study and a Sustainable Tourism Study. These reports form the background of many of the schemes proposed in the Monmouthshire and Newport Local Transport Plans (LTPs).

## **3.4 Local Policy**

Local Planning Authorities in Wales must prepare a prescribed collection of documents which set out planning policies in their local authority area. The following described documents are those which contain guidance relevant to NMUs in relation to this scheme.

## Local Development Plans

- 3.4.1** Since 2004, each local planning authority in Wales has been required to produce Local Development Plan (LDP). The LDP sets out each local planning authority's proposals for future development and use of land in their area. Once an LDP is adopted, it will form the basis of planning decisions that the local planning authority make.

## Local Transport Plans

- 3.4.2** The Transport Act 2000, as amended by the Transport (Wales) Act 2006, requires each Local Authority to produce a Local Transport Plan (LTP) every five years and to keep it under review.
- 3.4.3** Local Transport Plans replaced the RTP in 2015, and have been prepared for Newport, Monmouthshire and Cardiff. LTPs should reflect the requirements of the Active Travel (Wales) Act (2013) which places a duty on local authorities in Wales to continuously improve facilities and routes for pedestrians and cyclists, together with preparing maps identifying current and potential future routes.

## PRoW Improvement Plans

- 3.4.4** Under Section 60 of the Countryside and Rights of Way Act 2000 (the 'CROW' Act), every local authority is required to prepare and publish a Rights of Way Improvement Plan for the management, provision and promotion of the public rights of way in their areas. The aims of each plan are to extend the network and improve the connectivity of the routes, to improve accessibility for all users and to improve local awareness of the Public Rights of Way Network within each area.
- 3.4.5** The Welsh Assembly Government (WAG) legislative guidance highlights that ROWIPs should assess; amongst other things:
- The extent to which local Public Rights of Way meet the present and likely future needs of the public.
  - The opportunities provided by local Public Rights of Way and in particular by footpaths, cycle tracks, bridleways and restricted byways for exercise and other forms of outdoor recreation, enjoyment of the local countryside and accessibility to blind or partially-sighted persons, and others with mobility problems.

The remainder of this section summarises the key documents for each of the Local Authorities which are affected by this scheme and their content in relation to guidance informing on NMUs.

## Monmouthshire Local Transport Plan (2015)

- 3.4.6** The aim of the LTP is to facilitate and support the development of a modern, accessible, integrated and sustainable transport system for south east Wales, which increases opportunity, promotes prosperity for all and protects the environment; where walking, cycling, public transport, and sustainable freight provide real travel alternatives.

- 3.4.7** The LTP identifies that as a rural county, accessibility to employment, education, and services is a major issue. Analysis from the Welsh Index of Multiple Deprivation 2011 suggests that access to services in our most isolated rural communities is poor. Of the 58 lower super output areas in Monmouthshire, 22.4% are in the most deprived 10% in Wales for access to services.
- 3.4.8** Monmouthshire householders rely heavily on the private car for transport, with 84.8% of households owning (or having access to) a vehicle compared to the Welsh average of 77.1%. There are three or more cars in 8.7% of households.
- 3.4.9** In terms of commuting, more than 40% of residents commute to work outside the county, compared to less than 30% across Wales. The most important destination is Newport, and because of the County's closeness to the English border there are also substantial flows to Bristol and Gloucestershire.
- 3.4.10** These factors pose significant challenges in encouraging a meaningful modal share toward more sustainable modes of transport.
- 3.4.11** In response to the transport issues identified, the LTP sets out a long term strategy with objectives to improve travel in the County. It includes a series of policies, desired outcomes, interventions and generic scheme proposals. The objectives support the outcomes set out in the Wales Transport Strategies and the priorities determined in the LTP guidance. The 13 objectives are:
- 1) To reduce the number and severity of road traffic casualties.
  - 2) To improve actual and perceived level of personal security when travelling.
  - 3) To improve access for all and promote equality of opportunity to employment opportunities, services, healthcare, education, tourism and leisure facilities
  - 4) To improve connectivity by sustainable transport between the SE Wales Valleys and the rest of Wales, the UK and Europe.
  - 5) To improve interchange within and between modes of transport.
  - 6) To improve the quality, efficiency and reliability of the transport system.
  - 7) To reduce traffic growth, traffic congestion and to make better use of the existing road system.
  - 8) To achieve a modal shift towards more sustainable forms of transport for moving people and freight.
  - 9) To reduce significantly carbon emissions from transport.
  - 10) To reduce the impact of the transport system on the local street scene and the natural, built and historic environment.
  - 11) To promote sustainable travel and to make the public more aware of the consequences of their travel choices on climate, the environment and health.
  - 12) To ensure developments in the SE Wales Valleys are accessible by sustainable transport
  - 13) To make sustainable transport and travel planning an integral component of regeneration schemes

## Monmouthshire Local Development Plan (2014)

- 3.4.12** The Monmouthshire Local Development Plan (LDP) sets out the Council's vision and objectives for the development and use of land in Monmouthshire, together with the policies and proposals to implement them over a 10 year period to 2021.
- 3.4.13** The LDP has an essential role in promoting and achieving sustainable accessibility in Monmouthshire which is reflected in the plan's objectives, policies and proposals. The LDP encourages development towards an integrated, sustainable and safe transport system, where possible reducing the need to travel, and enhancing the opportunities for walking, cycling and public transport as alternative modes to car travel.
- 3.4.14** The LDP spatial strategy focuses development in those locations that provide the best opportunities for achieving sustainable development which offer a choice of transport modes and contribute towards the development of a sustainable transport network. An appropriate amount of development is also allocated in the County's rural areas, with a focus on those rural towns and villages that have the best access to public transport and services. The LDP does, however, recognise that the car will continue to play an important role in the economic and social well-being of the County given that in many rural areas there is often no realistic alternative mode of transport.
- 3.4.15** LDP Objective 14 aims to provide opportunities for integrated sustainable transport, for increased walking, cycling and use of public transport, for reducing reliance on the private motor car and for reducing the need to travel.
- 3.4.16** Strategic Policy S16 (Transport) assists in meeting this and other relevant objectives which seek to build sustainable communities, by setting out the key transport principles against which development proposals will be assessed. It also identifies a number of strategic transport schemes identified in the RTP.
- 3.4.17** The LDP's development management policies for sustainable transport and accessibility seek to implement Strategic Policy S16 by providing the policy framework to enable the provision of integrated sustainable transport, increased walking, cycling and public transport and reducing the need to travel. Section 6.4 of the LDP contains the following policies in relation to achieving sustainable accessibility:
- a) Policy MV1 – Proposed Developments and Highway Considerations;
  - b) Policy MV2 – Sustainable Transport Access;
  - c) Policy MV3 – Public Rights of Way;
  - d) Policy MV4 – Cycleways;
  - e) Policy MV5 – Improvements to Public Transport Interchanges and Facilities;
  - f) Policy MV6 – Canals and Redundant Rail Routes;
  - g) Policy MV7 – Rear Access /Service Areas;
  - h) Policy MV8 – Rail Freight; and
  - i) Policy MV9 – The Road Hierarchy.
- 3.4.18** Policy MV10 specifically identifies a number of transport routes and schemes which will be safeguarded from development that would be likely to prejudice their implementation.

**3.4.19** It should be noted that the proposed schemes have been identified from a number of sources and not all those listed are likely to be implemented during the plan period. Most do not have funding in place at the present time, particularly the large scale schemes that will be implemented through the Welsh Government.

**3.4.20** Table 3.1 identifies the transport routes and schemes will be safeguarded from development that would be likely to prejudice their implementation.

**Table 3.1 Schemes to be Safeguarded from Development in Monmouthshire’s Local Development Plan 2014**

<b>Welsh Government Road Schemes</b>	<ul style="list-style-type: none"> <li>• M4 corridor enhancement scheme Magor to Castleton.</li> </ul>
<b>Monmouthshire County Council Road Schemes</b>	<ul style="list-style-type: none"> <li>• B4245 Magor/Undy By-pass;</li> <li>• B4245/M48 Link Road;</li> <li>• B4245/Severn Tunnel Junction Link Road;</li> <li>• A48 Chepstow Outer By-pass; and</li> <li>• A472 Usk By-pass.</li> </ul>
<b>Public Transport Improvement Schemes</b>	<ul style="list-style-type: none"> <li>• Abergavenny rail station interchange;</li> <li>• Chepstow rail station and bus station interchange;</li> <li>• Severn Tunnel Junction interchange;</li> <li>• Monmouth coach stop;</li> <li>• Monmouth park and ride;</li> <li>• Chepstow park and ride;</li> <li>• Monmouth bus station improvement; and</li> <li>• Abergavenny bus station improvement.</li> </ul>
<b>Walking and Cycling Schemes</b>	<ul style="list-style-type: none"> <li>• Monmouth Links Connect 2;</li> <li>• Abergavenny walking and cycling network;</li> <li>• Llanfoist pedestrian and cycling river crossing; and</li> <li>• Severn Tunnel Junction pedestrian and cycling access.</li> </ul>

**Monmouthshire Rights of Way Improvement Plan (2007)**

**3.4.21** The Monmouthshire Rights of Way Improvement Plan was approved on 3 October 2007. It details the vision for Monmouthshire’s Public Rights of Way:

- a) To recognise the economic, social and heritage value of our public rights of way network as an important investment in the future for the residents and visitors of Monmouthshire;
- b) To maintain and improve local Public Rights of Way in order to promote and encourage their use and enjoyment for the physical and mental wellbeing of all of Monmouthshire’s residents and visitors; and
- c) To sustain the quality and diversity of Monmouthshire’s countryside and to promote responsible countryside access for all.

**3.4.22** The Countryside and Rights of Way Act 2000 specifically requires local highway authorities to assess the needs of blind or partially sighted people and others with mobility problems. People with mobility problems include older and disabled people, or those with young children and pushchairs. Family and friends who accompany people with mobility problems are also affected by the accessibility of the rights of way network and to countryside sites.

**3.4.23** Monmouthshire County Council considered the needs of the disabled to the countryside in 2004 and approved a Least Restrictive Access Policy for Public Rights of Way. This policy has resulted in a large demand for self-closing gates. It is now very rare for new stiles to be erected on the network and the majority of maintenance work is predominantly the installation of self-closing gates, which is opening up the network to a far greater amount of the population and is particularly popular with the growing population of elderly walkers.

#### **Newport City Council Local Transport Plan (2006)**

**3.4.24** The Transport Act 2000, as amended by the Transport (Wales) Act 2006, requires Newport City Council to produce a Local Transport Plan (LTP) every five years and to keep it under review.

**3.4.25** The priorities of the LTP are to support:

- a) Economic growth: Support economic growth and safeguard jobs across Wales, but with a particular focus on the Cardiff Capital Region;
- b) Access to employment: Reduce economic inactivity by delivering safe and affordable access to employment sites;
- c) Tackling poverty: Maximise the contribution that effective and affordable transport services can make to tackling poverty and target investment to support improvements in accessibility for the most disadvantaged communities in the region;
- d) Sustainable travel and safety: Encourage safer, healthier and sustainable travel; and
- e) Access to services: Connect communities and enable access to key services.

#### **Newport City Council Local Development Plan (2015)**

**3.4.26** The Newport Local Development Plan (LDP) was adopted on 27 January 2015 and sets out the development framework for Newport until 2026. Growth and regeneration are key requirements of the plan, to aid recovery from the economic downturn, together with sustainability. The vision of the Plan is:

*“As a gateway to Wales, Newport will be a centre of regeneration that celebrates its culture and heritage, while being a focus for varied economic growth that will strengthen its contribution to the region. It will be a place that people recognise as a lively, dynamic, growing City, with communities living in harmony in a unique natural environment.”*

**3.4.27** The following LDP policies are relevant to this report:

- a) Policy T5 Walking and Cycling;
- b) Policy T6 Public Rights of Way Improvement;
- c) Policy T7 Public Rights of Way and New Development;
- d) Policy T8 All Wales Coast Path;

- e) Policy CF4 Riverfront Access; and
- f) Policy CF5 Usk and Sirhowy Valley Walks.

### **Newport City Council Rights of Way Improvement Plan: Improving Access to the Countryside (2007)**

- 3.4.28** The Plan identifies common issues and comments from public consultation, grouped by user type.
- 3.4.29** Walkers are by far the most popular recreational use of the Public Rights of Way network in Newport, with the majority of respondents being members of a walking club or association. Difficulties in following Public Rights of Way were identified as a result of inadequate waymarking. Path surfaces overgrown with vegetation and paths obstructed with crops/ploughing were also highlighted as major difficulties when using the network.
- 3.4.30** Walkers with vision impairment and walkers with mobility restrictions identified when installing or replacing damaged structures such as stiles on public rights of way, they should always be with pedestrian gates and dog latches to aid walkers with guide dogs. It was also suggested that handrails would be a great benefit if fitted on both sides of any type of step construction, board walk, bridge or any similar structure you would expect to find on a Public Right of Way.
- 3.4.31** A review of the current rights of way by the Plan showed that there was a shortfall in the availability of bridleway routes in Newport, with only 2.3% of the network classified as bridledways. During consultation with horse riders, the following issues were raised:
- a) The fragmentation of the bridleway network made horse riding difficult in Newport;
  - b) It is felt that not being allowed to use routes such as the canal towpath was unfair and that cyclists were given higher status, but were in fact a greater hazard to other users of the towpath;
  - c) The linear permissive bridleway through Allt-yr-yn nature reserve, and the permissive section running from the 14 Locks Canal Centre, south towards the M4 is, in theory, an ideal alternative to the tow path, but due to lack of maintenance is currently in a total unusable condition and needs to be resurfaced;
  - d) Links need to be explored with Forestry Commission managed woodlands to allow local well signposted waymarked circular routes;
  - e) Very few horse owners have the means of transporting their horses, so local routes, close to stables, are essential for recreational access to the countryside;
  - f) Green lanes, in general, were seen as ways of providing increased access routes for horse riders. However, many were known to be completely obstructed;
  - g) In many situations, riders were unsure if the routes they were using were in fact 'definitive' routes, and when riding certain tracks, whether they were permitted to do so; and
  - h) The establishment of well-defined entry points into Forestry Commission land, together with vehicle and trailer parking areas.



**3.4.32** The assessment identified that the current cycle network was of considerable value for ‘everyday’ experienced cyclists. The main deficiencies considered during consultations, were identified as:

- a) Within Newport, there is a lack of general off-road cycle routes suitable for recreational use, particularly off-road family circular routes.
- b) Signage of routes that are already in situ, is inadequate.
- c) Poor information is available in relation to the cycling network in Newport.
- d) Opportunities that the proposed Newport to Wentwood cycle route would present, would be greatly welcomed by all types of cyclists i.e. serious users and the more recreational type of use.
- e) The availability of Forestry Commission owned land, Council owned woodland and other open spaces which are suitable for traffic free circular cycle trails.

#### **Cardiff City Council’s Local Transport Plan (2015)**

**3.4.33** Cardiff’s Local Transport Plan identifies the key transport issues relevant to Cardiff, the high level interventions needed to address these and the specific priorities for the local authority to deliver in the plan’s five year programme (2015 – 2020). The Plan also outlines the Council’s medium and longer term aspirations up to 2030.

**3.4.34** Investment in the regional transport network, particularly the public transport system, will have a key role to play in supporting projected growth and boosting the competitiveness of the regional economy by:

- a) providing new transport capacity;
- b) improving intra-regional connectivity between key settlements and Cardiff;
- c) expanding the effective labour market catchment for businesses, enabling firms to recruit from a wider skills base;
- d) increasing access to a wider range of job opportunities by increasing the reach of public transport;
- e) increasing the productive capacity of the local economy by increasing connectivity and reducing journey times;
- f) expanding access to markets for companies;
- g) facilitating the growth of business clusters in the larger cities (for instance around the designated Enterprise Zones and development sites), helping to stimulate competition and innovation.

**3.4.35** These challenges cannot be addressed by the City of Cardiff in isolation. Indeed, as many of the pressures on the city’s network are generated by settlements outside Cardiff, it is essential that developments and transport interventions beyond the city’s administrative boundary support the city’s demand management and modal shift objectives by maximizing the opportunity to travel by sustainable modes.

**3.4.36** Ensuring this complementary approach is vital in order to meet the priorities set out by the Welsh Government for targeted investment: supporting economic growth, reducing economic inactivity, tackling poverty and encouraging safer, healthier and sustainable travel.

### **Cardiff City Council's Local Development Plan (2015)**

The Local Development Plan provides the strategy and policy framework for the development and conservation of Cardiff for the 20 year period from 2006 to 2026. It will be used by Cardiff Council to guide and control development, providing the local policy basis by which planning applications will be determined in future years.

The Local Development Plan strategy is comprised of six key elements, including:

- a) Growing to meet future needs: delivering 40,000 new jobs and 41,100 dwellings over the plan period, responding to Cardiff's role as economic driver of the city-region and delivering Wales Spatial Plan objectives, the Council's overall vision and the Local Development Plan objectives.
- b) Sustainable transportation solutions: responding to the challenges associated with new development by setting out an approach aimed at minimising car travel, maximising access by sustainable transportation and improving connectivity between Cardiff and the wider region. The Plan sets out a strategy to achieve this by making the best use of the current network, managing demand and reducing it where possible and widening travel choices. The aim is to secure a modal split of 50% car and 50% non-car modes.
- c) Bringing forward new infrastructure: the Plan sets out an approach which requires the timely provision of new infrastructure including community facilities, transportation and other services.

### **Cardiff City Council's Public Rights of Way Improvement Plan (2008)**

#### **3.4.37**

Cardiff's Public Rights of Way Improvement Plan assesses the current management and use of Cardiff's rights of way network and sets out an initial three year programme to improve on the current situation, through targeted actions. Relevant key aims and priorities identified in the plan are listed below:

- a) Improve the visibility of the network 'on the ground'. More sign-posting and information centres must be established
- b) Improve the awareness of public rights of way and encourage their use by all groups by means of publicity and promotion
- c) Ensure Cardiff's participation and task completion in the creation of an 'All Wales Coastal Path'
- d) To the most realistic and reasonable extent the network must be made more suitable for disabled users and those with impairment
- e) Practical means must be established to deal with perceived safety fears
- f) Establish an extended network of cycle paths – ensure that these paths are appropriately sign-posted
- g) Increase the number of easily accessible equestrian routes

## **3.5 Summary**

- 3.5.1** As set out in earlier sections of this report, the Welsh Government adopted its Plan for the M4 Corridor around Newport in July 2014 and its aims and transport planning objectives are set out in section 1.2.
- 3.5.2** The Scheme Objectives (TPOs) align to national, regional and local transport planning policies in terms of supporting economic growth, connectivity, accessibility and complementing sustainable travel including walking and cycling for local trips. These objectives encourage the development of links for Active Travel.
- 3.5.3** The policies detailed above are considered in the development of the scheme specific objectives for NMUs that are set out in section 14 of this report.

## 4 Non-Motorised User Activity

- 4.1.1** This section looks at the existing NMU activity around the scheme. There is some discussion about the figures and their interpretation at the end of this section.
- 4.1.2** To observe trends in NMU activity within the vicinity of the proposed new section of motorway, surveys on intersecting routes have been conducted. Surveys were undertaken on two weekdays and three Sundays in May and June 2015. Each route was surveyed once on one of the weekday surveys and once on one of the Sunday surveys.
- 4.1.3** All surveys were conducted between 07:00 and 19:00. (Survey dates include Tuesday 12<sup>th</sup> May 2015, Thursday 14<sup>th</sup> May 2015, Sunday 17<sup>th</sup> May 2015, Sunday 24<sup>th</sup> May 2015 and Sunday 7<sup>th</sup> June 2015).
- 4.1.4** The daily counts are summarised in Table 4.1 overleaf. Each survey location details the NMU type and total for both surveyed days. Plans 003 and 004 included as Appendix C show the locations of each count and a visual percentage breakdown of each NMU type (pedestrians, cyclists, equestrians).

**Table 4.1 2015 Surveyed NMU Flows**

Site Number	Description	Weekday				Weekend			
		Ped.	Cyclist.	Equest.	Total	Ped.	Cyclist.	Equest.	Total
1	Coal Pit Lane (A48(M) Overbridge)	3	5	0	8	12	91	2	105
2	Pound Hill (M4 Overbridge)	0	0	0	0	5	13	0	18
3	A48 Cardiff Road (between Berry Hill Farm junctions)	5	82	0	0	44	170	0	214
4	Church Lane, Coedkernew	2	17	1	20	18	60	3	81
5	Green Lane, Coedkernew	1	0	0	1	0	6	0	6
6	B4239 Lighthouse Road, Coedkernew	0	88	0	88	384	7	0	391
7	Heol Pont-y-Cwaw	8	6	0	14	6	7	0	13
8	Corporation Road (south of Traston Road)	25	27	0	52	17	74	0	91
9	Nash Road (south of Meadows Road)	9	24	0	33	16	149	0	165
10	North Row (crossroads with Rushwall)	4	11	0	15	36	266	4	306
11	Bareland Street (east of A4810)	4	19	0	23	29	54	4	87
12	Green Moor Lane (east of A4810)	3	6	0	9	36	2	0	38
13	B4245 Newport Road (east of A4810 junction)	14	8	0	22	74	130	0	204

Site Number	Description	Weekday				Weekend			
		Ped.	Cyclist.	Equest.	Total	Ped.	Cyclist.	Equest.	Total
14	St Brides Road (north of M4)	17	3	0	20	60	67	0	127
15	Grange Road (south of M4)	98	9	0	107	0	0	0	0
16	Vinegar Hill (south of M4)	30	0	1	31	103	19	0	122
17	The Elms (south of M4)	29	0	1	30	54	35	0	89
18	B4245 Caldicot Road (west of M4 near Junction 23)	1	29	0	30	3	138	0	141
19	Bencroft Lane (north of M48)	2	1	0	3	1	3	0	4
20	PRoW Underpass on A48(M)	1	0	0	1	6	6	0	12
21	Druidstone Road (overbridge of M4)	9	82	1	92	14	187	2	203
22	Footpath running east from Pound Hill (north of M4)	0	0	0	0	0	0	0	0
23	Berryhill Farm Western Access to A48	1	0	0	1	34	159	0	193
24	Berryhill Farm Eastern Access to A48	22	0	0	22	43	15	0	58
25	Public Right of Way near Church Lane	1	6	0	7	5	63	0	68
26	Wales Coast Path from Heol Pont-y-Cwch	3	4	0	7	6	7	0	13
27	Wales Coast Path adjacent to Transporter Bridge	5	0	0	5	29	0	0	29
28	National Cycle Network Route 4 Entrance from Corporation Road	10	16	0	26	17	99	0	116
29	Nash Road Junction with National Cycle Network Route 4	0	0	0	0	27	380	4	411
31	Footpath 372/69/5 (between B4245 and J23A)	5	2	0	7	0	0	0	0
32	Footpath 372/12/1 (south of M4))	9	0	0	9	38	2	0	40
33	Footpath 372/30/1 (at Junction with The Elms)	8	0	2	10	41	17	7	65
34	B4591 Glasllwch Crescent (south of M4 Junction 27)	71	5	0	76	167	123	0	290
35	A4051 Malpas Road (south of M4 Junction 26)	154	45	0	199	337	184	0	521
36.1	B4596 Caerleon Road (south of M4 Junction 25)	356	12	0	368	279	120	0	399
36.2	Link between Junction 25 and Ennderale Court	288	7	0	295	203	37	0	240
36.3	Link between Junction 25 and Cumberland Road	92	5	0	97	77	2	0	79

Site Number	Description	Weekday				Weekend			
		Ped.	Cyclist.	Equest.	Total	Ped.	Cyclist.	Equest.	Total
<b>36.4</b>	Eastbound Link from Junction 25A to Junction 25	2	0	0	<b>2</b>	0	3	0	<b>3</b>
<b>36.5</b>	Westbound Link from Junction 25 to Junction 25A	53	5	0	<b>58</b>	55	47	0	<b>102</b>
<b>37.1</b>	A48 Southern Distributor Road (south arm of Junction 24)	23	20	0	<b>43</b>	-	-	-	-
<b>37.2</b>	B4237 Chepstow Road (west arm of Junction 24)	40	12	0	<b>52</b>	-	-	-	-
<b>37.3</b>	A449 Northbound (north arm of Junction 24)	0	0	0	<b>0</b>	-	-	-	-
<b>37.4</b>	A449 Southbound (north arm of Junction 24)	0	0	0	<b>0</b>	-	-	-	-
<b>37.5</b>	A48 Chepstow Road (east arm of Junction 24)	21	13	0	<b>34</b>	-	-	-	-
<b>37.6</b>	Junction 24 Toucan Crossing between A48 Southern Distributor Road and Central Island	45	-	-	<b>45</b>	-	-	-	-
<b>38</b>	A4810 at B4245 Junction	3	0	0	<b>3</b>	6	4	0	<b>10</b>
<b>39.1</b>	A48 Cardiff Road (east arm of Junction 28)	48	67	0	<b>115</b>	40	87	0	<b>127</b>
<b>39.2</b>	A48 Cardiff Road (southwest arm of Junction 28)	66	79	0	<b>145</b>	44	50	0	<b>94</b>
<b>39.3</b>	A467 Forge Road (north arm of Junction 28)	31	26	0	<b>57</b>	32	66	0	<b>98</b>
<b>Totals</b>		<b>1622</b>	<b>741</b>	<b>6</b>	<b>2369</b>	<b>2398</b>	<b>2949</b>	<b>26</b>	<b>5373</b>
- Indicates no data available									

**4.1.5** Table 4.2 shows visitor figures for the Wales Coast Path for given locations, provided by Monmouthshire County Council.

**Table 4.2 Wales Coast Path Visitor Figures**

	<b>Peterstone Wentlooge</b>	<b>Transporter Bridge</b>	<b>Burnt House</b>	<b>West Usk LH</b>	<b>Goldcliff</b>	<b>Redwick</b>	<b>Solutia</b>
<b>Ref</b>	<b>N02</b>	<b>N05</b>	<b>N06</b>	<b>N07</b>	<b>N08</b>	<b>N12</b>	<b>N13</b>
<b>Aug 12</b>	760	388	209	2589	49	196	2798
<b>Sept 12</b>	556	402	384	2159	49	187	1951
<b>Oct 12</b>	690	393	214	2011	5	233	1139
<b>Nov 12</b>	249	241	151	1470	149	234	841
<b>Dec 12</b>	178	289	90	906	60	56	846
<b>Jan 13</b>	328	404	94	1837	245	62	875
<b>Feb 13</b>	187	359	134	2190	1029	92	1541
<b>Mar 13</b>	288	341	170	1783	1570	128	1268
<b>Apr 13</b>	456	488	250	2335	2830	219	1824
<b>May 13</b>	470	530	312	3381	4867	207	2360
<b>Jun 13</b>	545	624	284	2846	4885	333	2776
<b>Jul 13</b>	597	542	289	3266	6448	373	2906

## 4.2 Discussion and Summary

- 4.2.1** Based on the results of the surveys, it can be observed that there is minimal equestrian activity on all routes in comparison to the prevalence of walkers and cyclists on the survey dates.
- 4.2.2** The predominant NMU mode on the survey dates is pedal cycle, which reflects the presence of the National Cycle Network running to the south of Newport.
- 4.2.3** Overall, NMU activity is noticeably higher for all types on the weekend, suggesting that most routes are utilised for recreational activity rather than commuting.
- 4.2.4** Surveys around the existing motorway junctions, in particular Junction 25 (Caerleon Road), Junction 26 (Malpas) and Junction 27 (High Cross), all show noticeably high weekday NMU flows, which may be representative of their location in the vicinity of schools.
- 4.2.5** Counts on B4239 Lighthouse Road and A48 Cardiff Road show that when combined, 170 cyclists were identified on the weekday counts and 177 cyclists on weekend counts. The weekday counts show the flow is split roughly equal, with 48% using the A48 Cardiff Road and 52% using the B4239 Lighthouse Road. On the weekend, the flow of cyclists increases significantly on the A48 Cardiff Road, totalling 96% of the counted users. This trend may reflect traffic conditions and safety concerns during weekday flow conditions on the A48 Cardiff Road.
- 4.2.6** The counts were undertaken prior to the opening of the Cardiff to Newport cycle route, which would suggest a relatively high patronage of the new route could be expected when it opens, assuming that the route is adequately signposted and promoted.
- 4.2.7** The visitor figures for the Wales Coast Path show that winter time visitor numbers are reduced when compared to summer visitor numbers, reflecting the difference in clemency of the weather and daylight hours.



## 5 Vehicle Flows

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- 5.1.1** This section looks at vehicle flow data. In particular, this section examines the existing conditions, and considers the forecast data, where there is potential for interaction with NMUs.
- 5.1.2** To observe existing vehicle flows within the vicinity of the proposed scheme, Automated Traffic Counts and Manual Classified Count surveys on intersecting vehicular routes have been conducted. Surveys were undertaken in May 2015 for a period of two weeks.
- 5.1.3** Plans 005, 006 and 007 included as Appendix D show each survey location and the associated directional traffic flows measured at the junctions in the average weekday AM Peak, PM Peak and daily periods.
- 5.1.4** Table 5.1 below summarises both the observed flows during the traffic counts undertaken in May 2015 and the forecast traffic flows for the key links in the design year, 2037.
- 5.1.5** Traffic flow information for the forecast year has been taken from a traffic model showing the central growth core scenario for the construction of the proposed M4 Corridor around Newport.
- 5.1.6** For both the forecast and count data, the AM peak flows are the average weekday flows for the 0800 to 0900 hour. The PM Peak flows are the average weekday flows for the 1700 to 1800 hour.
- 5.1.7** For the forecast data, AADT represents the daily traffic flow, averaged over a year (including weekends and bank holidays). For the count data, the daily flows are the weekday flows averaged over the two week survey period.

**Table 5.1 Traffic Flow Data for 2015 Counts and 2037 Forecasts for the M4 Corridor Around Newport**

Links	2015 Weekday Counted Flows				2037 Forecast Weekday Flows				Summary of Change %				
	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	
Coal Pit Lane	NB	47	179	866	890	64	239	1145	1177	36%	34%	32%	32%
	SB	247	45	903	919	336	60	1194	1215	36%	34%	32%	32%
	2 way	294	224	1769	1809	400	300	2339	2392	36%	34%	32%	32%
Pound Hill	NB	2	12	65	72	2	16	86	95	36%	34%	32%	32%
	SB	46	5	139	140	63	6	184	185	36%	34%	32%	32%
	2 way	48	17	204	212	65	22	270	280	36%	34%	32%	32%
A48 Cardiff Road (between Castleton and Cleppa Park)	EB	1327	903	8884	10238	1576	1320	13102	15099	19%	46%	47%	47%
	WB	862	1086	7979	9195	1159	1269	11008	12686	34%	17%	38%	38%
	2 way	2189	1990	16862	19433	2735	2590	24110	27785	25%	30%	43%	43%
Church Lane	NB	59	64	375	383	80	85	495	506	36%	34%	32%	32%
	SB	31	27	286	314	42	36	378	415	36%	34%	32%	32%
	2 way	89	91	661	697	121	121	873	922	36%	34%	32%	32%
B4239 Lighthouse Road, Coedkernew	NEB	162	195	1414	1630	543	355	2756	3176	235%	82%	95%	95%
	SWB	157	199	1467	1690	268	310	1832	2112	70%	56%	25%	25%
	2 way	319	394	2881	3320	990	960	4589	5288	210%	144%	59%	59%
Corporation Road (South of Traston Road)	NB	141	228	1946	2242	180	261	2326	2681	27%	15%	20%	20%
	SB	140	67	1254	1446	182	84	1530	1763	30%	26%	22%	22%
	2 way	282	295	3200	3688	362	345	3856	4444	29%	17%	21%	21%
Meadows Road/Nash Road (between Pye Corner and Nash Road Junction)	NB	493	262	4561	5256	577	388	5602	6457	17%	48%	23%	23%
	SB	510	426	5030	5797	667	509	6071	6997	31%	19%	21%	21%
	2 way	1002	688	9591	11053	1243	898	11674	13453	24%	30%	22%	22%
Rushwall (east of Junction with North Row)	EB	2	4	44	44	2	5	58	58	36%	34%	32%	32%
	WB	3	5	45	45	3	6	59	59	36%	34%	32%	32%
	2 way	4	9	88	89	5	11	116	117	36%	34%	32%	32%
Rushwall (west of Junction with North Row)	EB	17	23	214	240	23	31	283	318	36%	34%	32%	32%
	WB	13	17	153	164	17	22	202	216	36%	34%	32%	32%
	2 way	30	40	367	404	40	53	485	534	36%	34%	32%	32%

Links		2015 Weekday Counted Flows				2037 Forecast Weekday Flows				Summary of Change %			
		AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h
North Row (north of junction with Rushwall)	NB	43	42	413	467	59	56	546	618	36%	34%	32%	32%
	SB	34	50	413	447	46	67	546	591	36%	34%	32%	32%
	2 way	77	92	826	914	105	123	1092	1209	36%	34%	32%	32%
North Row (south of junction with Rushwall)	NB	86	68	1128	1300	170	111	1710	1971	97%	63%	52%	52%
	SB	153	130	1449	1669	176	184	1959	2258	15%	41%	35%	35%
	2 way	239	198	2576	2969	346	295	3670	4229	45%	49%	42%	42%
Bareland Street	EB	10	20	162	176	13	26	214	233	34%	33%	32%	32%
	WB	57	28	317	339	76	37	419	449	34%	33%	32%	32%
	2 way	67	47	479	516	89	63	633	682	34%	33%	32%	32%
Green moor Lane	EB	1	0	11	12	1	0	14	16	37%	0%	32%	32%
	WB	1	0	13	15	1	0	17	20	37%	0%	32%	32%
	2 way	2	0	23	27	3	0	30	36	37%	0%	32%	32%
St Brides Road	NB	41	32	340	389	55	43	450	514	34%	33%	32%	32%
	SB	27	41	345	378	36	55	456	500	34%	33%	32%	32%
	2 way	68	73	685	767	91	97	905	1015	34%	33%	32%	32%
Rockfield Road	NB	2	4	29	33	3	5	38	44	37%	0%	32%	32%
	SB	1	4	29	34	1	5	38	45	37%	0%	32%	32%
	2 way	3	7	58	67	3	9	76	89	37%	0%	32%	32%
B4245 Caldicot Road (east of M4)	EB	492	601	5247	6047	974	1113	10061	11595	98%	85%	92%	92%
	WB	512	495	5124	5906	1135	1007	10656	12281	122%	103%	108%	108%
	2 way	1004	1096	10371	11952	2108	2120	20717	23876	110%	93%	100%	100%
B4245 Caldicot Road (below M4 overbridge)	NB	492	601	5247	6047	780	519	6299	7259	59%	-14%	20%	20%
	SB	512	495	5124	5906	402	487	4490	5174	-22%	-2%	-12%	-12%
	2 way	1004	1096	10371	11952	1182	1006	10789	12433	18%	-8%	4%	4%
B4245 Caldicot Road (west of M4)	EB	492	601	5247	6047	738	506	5945	6851	50%	-16%	13%	13%
	WB	512	495	5124	5906	433	717	5719	6591	-15%	45%	12%	12%
	2 way	1004	1096	10371	11952	1171	1224	11664	13442	17%	12%	12%	12%
Bencroft Lane	NWB	3	3	29	30	3	4	38	40	34%	33%	32%	32%
	SEB	1	4	28	29	1	5	37	38	34%	33%	32%	32%

Links	2015 Weekday Counted Flows				2037 Forecast Weekday Flows				Summary of Change %				
	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	
	<b>2 way</b>	3	7	57	60	4	9	75	79	34%	33%	32%	32%
<b>B4245 Newport Road (east of A4810)</b>	<b>EB</b>	473	976	6930	7987	718	750	7062	8139	52%	-23%	2%	2%
	<b>WB</b>	956	457	6495	7485	925	626	7096	8178	-3%	37%	9%	9%
	<b>2 way</b>	1429	1433	13425	15472	1644	1377	14159	16317	15%	-4%	5%	5%
<b>B4245 Newport Road (west of A4810)</b>	<b>EB</b>	163	230	1934	2229	382	559	4958	5714	135%	143%	156%	156%
	<b>WB</b>	229	232	2168	2498	696	530	6081	7008	204%	129%	180%	180%
	<b>2 way</b>	392	462	4102	4727	1078	1089	11039	12722	175%	136%	169%	169%
<b>B4591 Glasllwch Crescent</b>	<b>NB</b>	1119	880	9094	10481	1364	1276	12304	14179	22%	45%	35%	35%
	<b>SB</b>	957	828	8509	9806	1110	1089	10858	12513	16%	31%	28%	28%
	<b>2 way</b>	2075	1708	17603	20286	2474	2365	23162	26693	19%	38%	32%	32%
<b>B4591 High Cross Road</b>	<b>NB</b>	519	1126	8588	9897	831	1542	11888	13700	60%	37%	38%	38%
	<b>SB</b>	967	527	7568	8721	1300	615	9257	10668	34%	17%	22%	22%
	<b>2 way</b>	1486	1652	16155	18618	2131	2157	21145	24368	43%	31%	31%	31%
<b>A4051 Malpas Road (north of M4)</b>	<b>NB</b>	1752	2196	18476	21293	2036	2260	21703	25012	16%	3%	17%	17%
	<b>SB</b>	2080	1894	19097	22008	2522	2030	23008	26516	21%	7%	20%	20%
	<b>2 way</b>	3832	4090	37573	43301	4558	4290	44712	51528	19%	5%	19%	19%
<b>A4051 Malpas Road (south of M4)</b>	<b>NB</b>	912	1221	11060	12746	954	1006	11503	13256	5%	-18%	4%	4%
	<b>SB</b>	921	977	10426	12015	874	833	10664	12289	-5%	-15%	2%	2%
	<b>2 way</b>	1832	2197	21486	24761	1828	1840	22166	25546	0%	-16%	3%	3%
<b>A4042 Heidenheim Drive (south of M4)</b>	<b>NB</b>	1079	1839	14363	16552	1681	2203	17202	19825	56%	20%	20%	20%
	<b>SB</b>	2029	1313	15621	18003	2241	1734	17452	20113	10%	32%	12%	12%
	<b>2 way</b>	3107	3152	29984	34555	3922	3937	34655	39937	26%	25%	16%	16%
<b>A4042 Malpas Relief Road (north of M4)</b>	<b>NB</b>	1493	1846	16210	18681	2229	2683	22745	26212	49%	45%	40%	40%
	<b>SB</b>	2244	1483	16602	19133	2790	2071	21652	24953	24%	40%	30%	30%
	<b>2 way</b>	3737	3330	32812	37814	5018	4755	44397	51165	34%	43%	35%	35%
<b>B4596 Caerleon Road (north of M4)</b>	<b>NB</b>	515	784	6658	7673	672	1229	9151	10546	31%	57%	37%	37%
	<b>SB</b>	722	522	6385	7358	909	483	7244	8348	26%	-7%	13%	13%
	<b>2 way</b>	1237	1305	13043	15031	1581	1712	16394	18893	28%	31%	26%	26%
<b>B4596 Caerleon Road</b>	<b>NB</b>	786	795	7827	9020	1027	1080	11149	12849	31%	36%	42%	42%

Links	2015 Weekday Counted Flows				2037 Forecast Weekday Flows				Summary of Change %				
	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	
<b>(south of M4)</b>	<b>SB</b>	574	620	5997	6911	991	928	9771	11260	73%	50%	63%	63%
	<b>2 way</b>	1359	1415	13824	15932	2019	2008	20920	24109	48%	42%	51%	51%
<b>A4042 EB Link Road before B4596 Diverge</b>		1572	1699	15208	17527	1392	1459	13002	14984	-11%	-14%	-15%	-15%
<b>B4596 EB Link Road</b>		602	850	7015	8085	2095	2269	20232	23317	248%	167%	188%	188%
<b>B4596 WB Link Road</b>		865	781	8153	9395	2049	2050	20102	23166	137%	162%	147%	147%
<b>A4042 WB Link Road after M4 J25A</b>		1770	1536	16074	18525	1417	1601	14419	16617	-20%	4%	-10%	-10%
<b>A48 Southern Distributor Road (south of J24)</b>	<b>EB</b>	493	899	7496	8638	656	932	9466	10910	33%	4%	26%	26%
	<b>WB</b>	1002	772	8627	9943	1283	1187	12249	14117	28%	54%	42%	42%
	<b>2 way</b>	1494	1672	16123	18581	1939	2120	21716	25026	30%	27%	35%	35%
<b>B4237 Chepstow Road</b>	<b>EB</b>	530	484	5078	5852	798	884	7856	9053	51%	83%	55%	55%
	<b>WB</b>	515	710	5623	6481	366	841	6194	7138	-29%	19%	10%	10%
	<b>2 way</b>	1045	1193	10701	12333	1164	1725	14050	16192	11%	45%	31%	31%
<b>A48 Chepstow Road</b>	<b>EB</b>	843	918	8306	9573	1170	1068	10532	12137	39%	16%	27%	27%
	<b>WB</b>	1037	942	9159	10556	1200	1175	11216	12925	16%	25%	22%	22%
	<b>2 way</b>	1880	1860	17466	20128	2369	2243	21748	25063	26%	21%	25%	25%
<b>A449</b>	<b>NB</b>	924	1177	10806	12453	1604	1827	18318	21110	74%	55%	70%	70%
	<b>SB</b>	1445	1114	12162	14016	1846	1551	16116	18573	28%	39%	33%	33%
	<b>2 way</b>	2370	2291	22967	26469	3451	3378	34434	39684	46%	47%	50%	50%
<b>A4810 (north of B4245 junction)</b>	<b>NB</b>	930	670	7451	8586	880	1164	9761	11249	-5%	74%	31%	31%
	<b>SB</b>	699	892	7187	8282	1366	995	11367	13100	95%	12%	58%	58%
	<b>2 way</b>	1629	1561	14637	16868	2246	2159	21128	24349	38%	38%	44%	44%
<b>A4810 (south of B4245 junction)</b>	<b>NB</b>	258	580	4506	5193	662	937	7860	9058	156%	62%	74%	74%
	<b>SB</b>	519	297	3885	4477	1039	669	8367	9643	100%	125%	115%	115%
	<b>2 way</b>	777	877	8391	9670	1701	1607	16228	18702	119%	83%	93%	93%
<b>A48 Cardiff Road (east of J28)</b>	<b>EB</b>	1710	1011	13667	15750	2106	1782	18192	20966	23%	76%	33%	33%
	<b>WB</b>	779	1090	12043	13879	1090	1718	14495	16704	40%	58%	20%	20%
	<b>2 way</b>	2489	2101	25709	29629	3196	3500	32687	37670	28%	67%	27%	27%

Links		2015 Weekday Counted Flows				2037 Forecast Weekday Flows				Summary of Change %			
		AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h	AM Peak	PM Peak	0700-1900	24h
A467 Forge Road	NB	1089	1734	14168	16328	1771	2535	20143	23214	63%	46%	42%	42%
	SB	1225	1249	13030	15016	2800	2093	23192	26728	129%	68%	78%	78%
	2 way	2314	2982	27198	31344	4571	4628	43335	49942	97%	55%	59%	59%
A48 Cardiff Road (west of J28)	EB	987	1441	10978	12652	1417	2172	17515	20185	44%	51%	60%	60%
	WB	1501	888	10432	12022	2212	1457	16818	19381	47%	64%	61%	61%
		2488	2329	21410	24674	3629	3630	34333	39567	46%	56%	60%	60%
A48 Southern Distributor Road (east of proposed Docks Link junction)	EB	938	1078	11254	12969	1513	1772	16273	18754	61%	64%	45%	45%
	WB	1130	992	11701	13485	1631	1860	16599	19129	44%	88%	42%	42%
	2 way	2068	2070	22955	26454	3144	3632	32872	37883	52%	75%	43%	43%
A48 Southern Distributor Road (west of proposed Docks Link junction)	EB	938	1078	11254	12969	1527	1737	17576	20255	63%	61%	56%	56%
	WB	1130	992	11701	13485	1830	1512	15743	18142	62%	52%	35%	35%
	2 way	2068	2070	22955	26454	3357	3249	33319	38398	62%	57%	45%	45%
M4 Docks Link (Proposed)	NB					1270	1335	11068	12756				
	SB					1085	1647	13219	15235				
	2 way					2354	2982	24288	27990				
M4 Glan Llyn Link (proposed)	NB					898	941	8667	9988				
	SB					1171	1250	11699	13482				
	2 way					2069	2192	20366	23471				
A4810 (east of proposed M4 junction)	EB	314	395	3857	4445	935	517	6951	8011	197%	31%	80%	80%
	WB	250	373	3854	4441	536	954	7775	8960	114%	156%	102%	102%
	2 way	564	767	7711	8886	1471	1471	14726	16971	161%	92%	91%	91%
A4810 (west of proposed M4 junction)	EB	317	406	3931	4531	1277	981	11186	12891	302%	142%	185%	185%
	WB	267	382	4012	4623	667	978	8017	9239	150%	156%	100%	100%
	2 way	584	787	7943	9154	1944	1959	19202	22130	233%	149%	142%	142%
- Indicates no data available													

## 5.2 Vehicle Speeds

- 5.2.1** National speed limits currently apply on the existing M4 and A48(M) routes, with variable mandatory speed limits applied between Junction 24 and Junction 28. Speed limits on A-roads vary dependent upon the character of the surrounding area, as well as other factors. During the surveys undertaken to count vehicles, vehicle speed data was also collected and summarised.
- 5.2.2** Plans 001a and 001b show the measured 85th percentile speeds of all vehicles for the surveyed routes, in relation to the road speed limit, and are included as Appendix A.

## 5.3 Discussion and Summary

- 5.3.1** Certain links, such as the A48 are forecast to benefit from a reduction in traffic volumes. Peak hour flows indicate that on some busier links, there will be limited opportunities for crossing movements by pedestrians.
- 5.3.2** On the A48 Cardiff Road, the AM peak hour two-way vehicle flow was counted at 2970 vehicles per hour, and the PM peak hour vehicle two-way vehicle flows was counted at 2794 vehicles per hour. These flows, when divided equally between the four lanes on the A48 suggest that there is on average no more than a four second headway between vehicles. With the road being 12m wide, with a 50 mph speed limit, this makes at grade road crossings by NMUs difficult and dangerous and may serve to reduce NMU demand on this route.
- 5.3.3** On the B4245 Caldicot Road, near to the existing bridge beneath the existing M4, the AM peak hour two-way vehicle flow was counted at 1889 vehicles per hour, and the PM peak hour two-way vehicle flow was counted at 2032 vehicles per hour. These flows, when divided equally between the two lanes suggest that there is on average no more than a three second headway between vehicles. With the road being 7m wide, at national speed limit, this makes at grade road crossings by NMUs difficult and dangerous, and may also reduce NMU demand on this route.
- 5.3.4** Speed data collected alongside the Automated Traffic Count data indicate that actual speeds vary dependent on the time of day. During peak periods, congestion results in vehicle speeds far lower than the design speeds. In comparison, speeds at other times, such as night-time, indicate speeds higher than the speed limits.

## 6 Public Transport

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**6.1.1** The availability and convenience of access to the start/end points of public transport journeys forms a key consideration in the context of NMU activity.

**6.1.2** Maintaining accessibility to public transport services is critical in ensuring communities can access key local facilities. It also ensures that there are viable alternatives to car use for journeys that may be regarded as too far or too hazardous to be undertaken in their entirety by walking, cycling or by horse.

### 6.2 Local Buses

**6.2.1** Plan 002 in Appendix B shows the location of bus stops and transport interchanges, illustrating their dispersal. Cardiff Bus, Newport Bus, New Adventure Travel and Stagecoach currently operate the local bus services in and around Newport.

**6.2.2** Newport bus currently operates a demand responsive service to Redwick, Bishton and Llanwern and St Mellons, Marshfield and Castleton. Appendix F includes links to bus route information and timetables where available.

**6.2.3** Bus stops in and around Newport generally have no cycle parking facilities nearby. Most have shelters, and some have real time travel information displays. Buses also do not permit the carriage of cycles.

### 6.3 National Rail

**6.3.1** Rail services are available from the following stations in and around the study area:

- Newport High Street;
- Pye Corner, Bassaleg;
- Severn Tunnel Junction (Rogiet); and
- Caldicot.

**6.3.2** All of these stations offer direct rail services to Cardiff. Caldicot serves direct trains travelling to Chepstow, Gloucester and Birmingham. Severn Tunnel Junction, in addition serves direct trains travelling to Bristol, South West England, and Portsmouth.

**6.3.3** Newport High Street, in addition, serves direct trains to London, Cwmbran, Abergavenny, Hereford, Manchester and North Wales. Pye Corner currently only serves direct trains to Cardiff or Ebbw Vale, although there are understood to be plans to increase both service frequency and destination range. Links to rail service timetables are included in Appendix G.



## 6.4 Long Distance Buses and Coaches

**6.4.1** National coach services currently call at Cardiff, Newport and Chepstow. These are operated by Megabus and National Express, and serve destinations including London, and the airports, including Bristol, London Heathrow and London Gatwick. Bus services pick up and drop off from a roadside bus stop in Newport City Centre, outside the railway station on Queensway. In Chepstow, the bus stop for national coach services is a roadside bus stop on St Thomas Street in Chepstow town centre. The location for pick up and drop off, both in Chepstow and in Newport, have no dedicated cycle parking facilities, meaning that cycling is an unlikely means of transport for connecting with long distance buses.

## 6.5 Cardiff Capital Region Metro

**6.5.1** The Cardiff Capital Region Metro is a proposed improvement of public transport. The initial schemes include rail infrastructure improvements, station upgrades, park and ride schemes, improving bus routes and introducing walking and cycling schemes. As schemes are delivered, they could have an effect on NMU activity with the creation of new trip generators. This effect is unknown until details of the potential measures emerge.

**6.5.2** When The Plan for the M4 Corridor around Newport was adopted in July 2014, the Minister for Economy, Science and Transport confirmed that:

“The Plan is seeking to improve accessibility for people, Welsh goods and services to international markets by addressing capacity and resilience on the main gateway into South Wales, which is the M4 Corridor. This Plan forms an essential part of our vision for an efficient integrated transport system in South Wales. In parallel with the Plan, Welsh Government is taking forward a Cardiff Capital Region Metro. The Metro is seeking to improve accessibility to local employment sites, educational facilities and services within the Region and is complementary to the Plan for the M4 Corridor around Newport.”

**6.5.3** The Plan document outlines how:

“The draft Plan also acknowledged that public transport enhancement will contribute to some of the goals of the M4 Corridor around Newport. Studies during the draft Plan development identified that an increased use of public transport in the Newport area would not solve the problems on the M4 Corridor around Newport. Nevertheless, the Welsh Government recognises the importance of public transport improvements and a dedicated separate task group has been formed to take forward proposals to develop a metro system for South East Wales. The M4 Corridor around Newport Plan is compatible with, and will complement, the Cardiff Capital Region Metro and the electrification of the rail network.”

## 7 Accident Data

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**7.1.1** Accident Data is important to identify potential trends in accidents. These trends could have the potential to influence NMU behaviour, including choice of route, or in some cases avoidance of travel altogether.

### 7.2 Data Specification

**7.2.1** Two sources of personal injury accident data have been used for the route of the existing M4. Neither data source includes records of non-personal injury accidents.

**7.2.2** Accident statistics have been provided by Welsh Government for J23A, J24, J25/25A, J26 and J27. This accident data was extracted from the Integrated Roads Information System (IRIS), which includes a database of personal injury accidents on public roads that are reported to the police, and subsequently recorded, using the STATS19 accident reporting form.

**7.2.3** For J28, as well as the other routes in the study area which intersect the existing M4, publically available road safety data<sup>1</sup> published by the Department for Transport (DfT) has been utilised.

**7.2.4** The IRIS STATS19 data provides detailed statistics about the circumstances of personal injury accidents, including the types of vehicles involved and the consequent casualties and accident causes. All personal injury accident data from both sources has been obtained for the period January 2009 - December 2013 which represents the most recent 5-year period for which data was available at the time of request.

**7.2.5** The details provided within both sets of accident data record the following:

- a) Accident reference number;
- b) Date/time;
- c) Number of vehicles;
- d) Location;
- e) Weather conditions;
- f) Road type/speed limit/junction details/road surface condition;
- g) Whether in darkness or daylight;
- h) Special conditions/details of any carriageway hazards;
- i) Number of casualties; and
- j) Severity of injury to each casualty.

**7.2.6** Accident data was requested for the following local routes located in the Newport and Monmouthshire local authority areas:

- 1) Coal Pit Lane, Castleton (between the A48 and Druidstone Road);
- 2) Pound Hill, Castleton (between the A48 and Penylan Road);
- 3) M4 Junction 28 (including 1km section of Forge Road and A48);

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<sup>1</sup> DfT Road Safety Data <http://data.gov.uk/dataset/road-accidents-safety-data>

- 4) Bassaleg Road (between its junctions with Pye Corner and Gaer Park Lane);
- 5) Glasllwch Lane (between junctions of Bassaleg Road and Melbourne Way);
- 6) M4 Junction 27 (including 1km either side on B4591);
- 7) M4 Junction 26 (including 1km either side on A4051);
- 8) Stockton Road (Including Stockton Close cul-de-sacs);
- 9) M4 Junction 25/25A (including 1km either side on A4042 and B4596);
- 10) Rembrandt Way (between its junctions with Burton Road and Heather Rd);
- 11) Beaufort Road (between Gainsborough Dr and Christchurch Road junctions);
- 12) Christchurch Road (between Gibbs Road and Old Hill Crescent junctions);
- 13) Royal Oak Hill (between Chepstow Road and Catsash Road);
- 14) M4 Junction 24 (including 1km either side on A48, B4237 and A449);
- 15) Langstone Court Road (between Chepstow Road and 500m south of M4);
- 16) Waltwood Road (between its junctions with Magor Road and Hazel Road);
- 17) Magor Road (from Pencoed Lane to Tump Farm, Wilcrick);
- 18) M4 Junction 23A (including 1km on A4810 and B4245);
- 19) St Bride's Road (between Newport Road and Bowdens Lane junctions);
- 20) Vinegar Hill /Knollbury Lane, Undy (between B4245 and Bencroft Lane);
- 21) Rockfield Grove/The Elms, Undy (between B4245 and Bencroft Lane);
- 22) Bencroft Lane (between B4245 and Knollbury Lane);
- 23) A48 Cardiff Road (between Newport CC/Cardiff CC boundary and Blacksmiths Way roundabout);
- 24) Church Lane, Coedkernew (between Ty Mawr Lane and the LG roundabout);
- 25) B4239 Lighthouse Road (between Morgan Way and Pont Estyll Lane);
- 26) Corporation Road (south of Traston Road to the railway underbridge);
- 27) Nash Road (between Lee Way and Straits Lane);
- 28) Meadows Road (between Nash Road and Queensway Meadows);
- 29) North Row (between A4810 and Redwick village);
- 30) Straight Mile (between North Row and Whitson Substation);
- 31) Barecroft Common (between A4810 and Redwick Road, Magor);
- 32) Green Moor Lane, east of A4810;
- 33) B4245 (between Brewery access west of Magor and Station Road, Rogiet);  
and
- 34) Dancing Hill /Grange Road, Magor (between B4245 and Vinegar Hill).

**7.2.7** The routes above bisect the existing M4 or proposed new section of motorway in the Magor to Castleton study area and as such have the potential to be links used by NMUs.

**7.2.8** The proposed new section of motorway also includes two intermediate junctions to the south of Newport, which would connect with the existing A48 Southern Distributor Road and A4810. Traffic forecasts for a 2037 assessment year indicate that peak hour traffic flows on these routes would reduce by around 10% with the new section of motorway in place, which would benefit NMUs.

**7.2.9** It is important to note that motorways do not have provision for NMUs.

## 7.3 Analysis

**7.3.1** The available data has been analysed and filtered to include only accidents within the study area, as described above.

**Table 7.1. All Road User Accident figures (NMU Accidents in Brackets)**

Route No.	Route Name	Source of Data	Non-Motorway Accidents (January 2009 - December 2013)		
			Fatal	Serious	Slight
1	Coal Pit Lane, Castleton	WG/IRIS			
2	Pound Hill, Castleton	WG/IRIS			
3	M4 Junction 28	DfT Data		1	38
4	Bassaleg Road	DfT Data			4
5	Glasllwch Lane	DfT Data			
6	M4 Junction 27	WG/IRIS		2 (1)	9 (2)
7	M4 Junction 26	WG/IRIS		2 (1)	56 (13)
8	Stockton Road	DfT Data			
9	M4 Junction 25/25A	WG/IRIS	1	9 (6)	45 (10)
10	Rembrant Way	DfT Data			1
11	Beaufort Road	DfT Data			2 (2)
12	Christchurch Road	DfT Data			
13	Royal Oak Hill	DfT Data			
14	M4 Junction 24	WG/IRIS			26
15	Langstone Court Road	DfT Data			
16	Waltwood Road	DfT Data			1
17	Magor Road	DfT Data		1	
18	M4 Junction 23A	WG/IRIS		3 (1)	12
19	St Bride's Road	DfT Data			1
20	Vinegar Hill /Knollbury Lane, Undy	WG/IRIS			1 (1)
21	Rockfield Grove/The Elms, Undy	WG/IRIS			
22	Bencroft Lane	WG/IRIS			
23	A48	DfT Data		6 (1)	12 (1)
24	Church Lane, Coedkernew	DfT Data			
25	B4239 Lighthouse Road	DfT Data			
26	Corporation Road	DfT Data			
27	Nash Road	DfT Data			2
28	Meadows Road	DfT Data			1
29	North Row	DfT Data			
30	Straight Mile	DfT Data			
31	Barecroft Common	DfT Data			
32	Green Moor Lane	DfT Data			
33	B4245	DfT Data			1
34	Dancing Hill/Grange Road Magor	DfT Data			
<b>Total</b>			<b>1</b>	<b>24 (10)</b>	<b>212 (30)</b>

Data Sources: Welsh Government IRIS Stats19 and DfT GB Road Safety Data

**7.3.2** A total of 237 accidents occurred within the study area over the five year period between 2009 and 2013. 86% of these accidents occurred within the vicinity of M4 junctions, where traffic flows are likely to be highest.

**7.3.3** The fatal accident recorded in the study area occurred on the westbound Malpas slip at J25A of the M4. The accident occurred when a vehicle aquaplaned and collided with both the nearside and offside barriers.

**Table 7.2 Accidents in Study Area by Hour of Day**

Hour of Day	Accidents Involving All Road Users	NMU Accidents
0000-0059	2	0
0100-0159	1	0
0200-0259	1	1
0300-0359	1	0
0400-0459	1	0
0500-0559	1	0
0600-0659	3	1
0700-0759	11	2
0800-0859	24	6
0900-0959	9	1
1000-1059	9	1
1100-1159	8	0
1200-1259	9	1
1300-1359	24	2
1400-1459	11	1
1500-1559	20	3
1600-1659	23	6
1700-1759	23	1
1800-1859	22	8
1900-1959	17	2
2000-2059	7	2
2100-2159	4	1
2200-2259	4	1
2300-2359	2	0
<b>Total</b>	<b>237</b>	<b>40</b>

**7.3.4** Analysis of the figures presented in Table 7.2 above shows that 89% of all accidents occur between 0700 and 2000, and 59% of all accidents occur between 1300 and 2000. This is generally representative of the hourly flows of vehicles.

**Table 7.3 Accident Numbers by Month of Year**

Month	Accidents Involving All Road Users	NMU Accidents
January	21	3
February	21	6
March	19	3
April	26	4
May	14	5
June	19	2
July	20	3
August	15	1
September	21	5
October	22	1
November	29	3
December	10	4
<b>Total</b>	<b>237</b>	<b>40</b>

**7.3.5** The figures presented in Table 7.3 above show a very slight statistical skew between Greenwich Mean Time (End October – End March) and British Summer Time (End March – End October). Typically there are an average of 19 accidents per month during British Summer Time, but an average of 20 per month outside of this time.

## 7.4 NMU Accidents Trends

**7.4.1** There were a total of 40 accidents involving NMUs within the study area in the five year period of 2009 to 2013. This represents 17% of the total number of accidents.

**7.4.2** There were no recorded accidents involving equestrians in the study area within the five year study period.

**7.4.3** No fatal accidents involving pedestrians or cyclists occurred within the study area.

**7.4.4** Each of the recorded NMU accidents involved a collision between one NMU and one motorised vehicle.

**7.4.5** In order to better understand the available accident data in the study area, the cause of accidents as identified on the STATS19 reporting forms has been examined. The results for each motorway junction in the study area are outlined in detail below, along with other routes on which NMU accidents have been reported.

**7.4.6** It should be noted that no personal details of persons involved in road traffic accidents have been used in this assessment.

## M4 Junction 28

- 7.4.7** Despite the relatively high incidence of accidents involving vehicles, no NMU accidents occurred in the vicinity of Junction 28. A number of uncontrolled pedestrian crossing points are available at the junction, as well as a signalised toucan crossing on the M4 eastbound offslip. National Cycle Network Route 4 (NCN4) crosses the junction from the A48 (West) to the A467.

## M4 Junction 27

- 7.4.8** An accident occurred at Junction 27 when a vehicle entered the roundabout from the M4 eastbound offslip and collided with the rear wheel of a cyclist, resulting in serious injury. One pedestrian accident occurred north of the junction on the B4591 High Cross Road when a pedestrian stepped out in front of a vehicle, resulting in slight injury.
- 7.4.9** An accident involving a slight injury to a cyclist occurred south of Junction 27 at the junction of Glasllwch Crescent and Western Avenue. A description of the accident has not been provided on the STATS19 accident details form, although 'failed to look properly', 'failure to judge other persons path or speed' and 'poor turn or manoeuvre' are listed as the contributory factors.

## M4 Junction 26

- 7.4.10** One pedestrian and two cyclist accidents of slight severity occurred at the junction of Malpas Road and Bettws Lane. The pedestrian accident occurred when a vehicle collided with a pedestrian impaired by alcohol. The collision did not occur at a formal pedestrian crossing, although there are two signalised pedestrian crossings on Bettws Lane adjacent to the Malpas Road junction. Both cycle accidents involved cyclists manoeuvring across the path of vehicles causing collisions.
- 7.4.11** An accident involving a pedestrian occurred near the Aston Crescent/Ross Street priority controlled junction, when a pedestrian ran into the road from between a skip and a parked vehicle, resulting in serious injury to the pedestrian.
- 7.4.12** A number of further accidents occurred on or in the vicinity of Malpas Road south of the J26 roundabout. These majority of these accidents involved pedestrians stepping out into the path of vehicles between parked vehicles or stationary/slow moving traffic. The majority of incidents appear to have occurred at low speed, resulting in slight injury to pedestrians. Two cycle accidents also occurred in this area, one on the Junction 26 roundabout and one on Brynglas Road. Both involved cyclists crossing into the path of motorised vehicles.

## M4 Junction 25/25A

- 7.4.13** Two serious accidents occurred near the Caerleon Road/Beaufort Road priority controlled junction. One accident involved a vehicle turning right out of Beaufort Road colliding with a pedestrian who walked into the path of the vehicle. The second accident occurred when a vehicle turning left into Beaufort Road collided with a child on a bike which had cycled onto the carriageway from behind a parked car.
- 7.4.14** A serious accident involving a pedestrian occurred on Caerleon Road approximately 450m south of the junction, but details relating to the cause of the accident have not been reported.

- 7.4.15** A further accident resulting in serious injury to a pedestrian occurred on Caerleon Road approximately 900m south of the Junction 25 roundabout, adjacent to the Caerleon Road/Dean Street junction. The accident was caused by a pedestrian running into the road from behind a van. An additional accident occurred on Albany Road at its junction with Lyne Road, which falls just inside the Junction 25/25A study area as it is adjacent to the A4042. The accident was also caused by a young pedestrian running onto the carriageway.
- 7.4.16** A further six accidents involving slight injury to pedestrians occurred on or near Caerleon Road, south of the Junction 25 roundabout. These accidents are again characterised by pedestrians exhibiting dangerous behaviour on or near the carriageway resulting in collisions.
- 7.4.17** Five accidents resulting in slight injury to cyclists were recorded within the Junction 25/25A study area. One of these accidents occurred on the Junction 25 roundabout, however no description or contributory factors have been recorded on the STATS19 report form.
- 7.4.18** The remaining four cycle accidents occurred on Caerleon Road/St Julians Avenue to the south of Junction 25 and are characterised by poor behaviour by cyclists. Two of these accidents occurred at priority controlled junctions when the cyclist in each case failed to look properly or failed to observe give way markings at the junction. A third accident was caused by a cyclist entering the carriageway from the pavement without due care and attention, whilst the fourth occurred as a cycle and motorised vehicle were pulling away from a stop line at the Caerleon Road/Duckpool Road signalised junction. Advanced Stop Line (ASL) markings for cyclists are not available at this junction.

#### **Beaufort Road**

- 7.4.19** Two accidents involving NMU road users occurred on Beaufort Road. A slight injury to a pedestrian resulted when a vehicle collided with a pedestrian at the junction of Beaufort Road and Monet Crescent. Additionally a slight injury to a cyclist resulted when a motorised vehicle collided with a cyclist at the Beaufort Road/Holbein Road junction.
- 7.4.20** As these accidents were recorded from the DfT GB Road Safety database which does not include details of the cause of accidents, it is not possible to draw conclusions on the likely cause of these accidents.

#### **M4 Junction 24**

- 7.4.21** Despite the relatively high incidence of slight severity accidents involving vehicles, no NMU accidents occurred in the vicinity of Junction 24. The roundabout has signalised toucan crossing facilities to enable pedestrians and cyclists to traverse the junction along the A48 and B4237 arms.

#### **M4 Junction 23A**

- 7.4.22** A serious accident occurred on the B4245 Newport Road approximately 300m south east of the J23A roundabout. The accident occurred when a cyclist pulled over and was knocked over by a vehicle as he dismounted, resulting in serious injury to the cyclist.



## **A48, West of Newport**

- 7.4.23** An accident involving a pedestrian was recorded on the A48 near Coedkernew, at its priority controlled junction with Pound Hill. The accident occurred when a number of pedestrians crossed the A48 after a bus had dropped them off. A vehicle heading west struck one of the pedestrians resulting in serious injury.
- 7.4.24** There are no pedestrian crossing facilities in the vicinity of the Pound Hill junction, and whilst there is street lighting along this carriageway, the STATS19 form recorded the lighting conditions as 'Darkness: No Street Lighting'.
- 7.4.25** An accident involving a cyclist was recorded on the A48 approximately 200m north-east of its junction with Tyla Lane. The accident occurred in daylight when a vehicle struck a cyclist as both were heading in the south-west direction, causing slight injury to the cyclist. A description of the accident has not been recorded on the STATS19 form, although 'Dazzling Sun' and 'Too close to cyclist, horse or pedestrian' are listed as contributory factors.

## **Vinegar Hill /Knollbury Lane, Undy**

- 7.4.26** A slight accident occurred at the Meadow Rise/Oak Close Junction when a pedestrian ran into the road from behind a parked vehicle. This accident was also picked up in the previous section as there is an overlap between the existing M4 corridor study area and the area associated with the proposed M4 CaN.

## **Southern Distributor Road (SDR), Newport**

- 7.4.27** Whilst the SDR has not been considered within the scope of accident data collection, a high profile NMU accident resulting in a cyclist fatality occurred on 8th August 2012 at the junction of Usk Way. The accident occurred at a toucan crossing and was caused as a result of the cyclist entering the carriageway during the oncoming traffic green phase.

## **7.5 Discussion and Summary**

- 7.5.1** A total of 237 accidents occurred within the study area over the five year period between 2009 and 2013, with the 86% of these accidents occurring within the vicinity of M4 junctions. A total of 40 accidents involved NMUs, comprising 17% of the all accidents. A visual summary of the accident data is shown on Plans 001a and 001b in Appendix A.
- 7.5.2** Whilst it is noted that there were 34 accidents involving NMUs recorded in the immediate vicinity of the roundabouts of each of the existing M4 junctions, those junctions with infrastructure for pedestrians and cyclists show fewer accidents than those without specific provision. No NMU accidents were recorded at either Junction 24 or Junction 28 within the five year study period. Both of these junctions have walking and cycling routes which bisect the junction, providing signalised at-grade crossing points for pedestrians and cyclists. At the remaining junctions, where NMU facilities are less formalised, at least one NMU accident was recorded.
- 7.5.3** The analysis of the cause of NMU accidents, several of the accident reports indicate the accident resulted from dangerous road user behaviour by pedestrians and cyclists. There is no indication of the extent to which the quality of existing facilities may have contributed to accidents.

## 8 Development Proposals of Relevance

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- 8.1.1** For the purposes of forecasting future traffic flows in the 'M4 CaN Traffic Model', development proposals of relevance within the core modelling area have been compiled. The selection of development sites took place between 2014 and 2015. A table summarising each development's size, location, status and build out rate is included as Appendix H. The larger developments are also shown on Plan 002 in Appendix B.
- 8.1.2** This list consists of allocated sites specified within Local Development Plans, committed developments and sites which are currently under construction.
- 8.1.3** Employment and mixed-use sites are included. Residential developments with more than 100 units to be built out between 2014 and 2037 have been included. Developments of less than 100 developments over this time period have been excluded.
- 8.1.4** The core modelling area comprises Newport, east Cardiff and west Monmouthshire.
- 8.1.5** As set out in earlier sections of this document, the Cardiff Capital Region Metro is a proposed improvement of public transport. The impact on NMUs is unknown until details of the potential measures emerge.

## 9 Public Rights of Way Network

### 9.1 Introduction

**9.1.1** Listed below are the definitions from the UK Government<sup>2</sup> of types of routes which are considered 'Public Rights of Way'. Rights of way are shown on Plan 002 in Appendix B.

**Table 9.1 Public Rights of Way Definitions, as Defined by the UK Government**

Footpath	If the path is used for walking only, it is a footpath. This is different from a footway (the pavement alongside a road), in that it means the whole width of the highway. Footpaths are usually just tracks, and are rarely surfaced or lit. They are open to walkers, runners and users of mobility vehicles.
Bridleway	Bridleways are legally protected routes that the public can use on foot or on horseback. Cyclists are permitted to use the bridleways, although through the Countryside Act 1968 there is no obligation to facilitate the cyclists on the routes and they must give way to other users. Horse drawn vehicles are not permitted.
Byway open to all traffic (BOAT)	These are open to all forms of traffic; pedestrians, horse riders, cyclists and car and other motor vehicle drivers.
Restricted byway	On these routes there are restrictions on how you can travel. You are permitted to use the route on foot, horseback, bicycle or horse drawn carriage. You cannot use motorised vehicles along this route.
Permissive path	It is possible for landowners to allow access over their land without dedicating a right of way. These accesses are called permissive paths. To the user they are often indistinguishable from normal highways. Landowners can specify which user groups are permitted to use these routes, which can include cyclists, equestrians and pedestrians.
Access land	This is an area where public have a right of access on foot (walking, running, climbing) under the Countryside and Rights of Way Act 2000. Although there may be footpaths and trails running across this land, there is no legal obligation for users to follow them. There are a number of exempted activities associated with Access land including cycling, horse riding, camping, driving a vehicle and walking animals (other than dogs, which have to be kept on a leash at certain times). The land can be used for these activities if expressly permitted by the landowner.

<sup>2</sup> From <https://www.gov.uk/right-of-way-open-access-land/overview>

Common Land	Common land is private land over which both the landowners and commoners and members of the public have rights. The Countryside and Rights of Way Act 2000 introduced a right of access on foot over common land, which is a type of Access land under the Act. Each common often has its own rules with regards to permitted activities.
Green Lane	This term has no legal meaning, but is sometimes used to describe Unclassified County Roads, which may have similar rights as on BOATs. They are sometimes referred to on Ordnance Survey mapping as Other Routes with Public Access and shown with either green or red dots.

## 9.2 Promoted Routes

**9.2.1** The 'promoted' NMU routes (those identified or designated as NMU routes by local authorities or Sustrans) within the study area are shown below in table 9.2.

**Table 9.2 Promoted NMU Routes**

Route Name and Promoter	Route Description
National Cycle Network Route 4 (Sustrans)	National Cycle Network Route 4 is part of the Celtic Trail, a long distance route running east-west from London to Fishguard, passing through Monmouthshire, Newport, and Caerphilly.
National Cycle Network Route 47 (Sustrans)	National Cycle Network Route 47 is part of the Celtic Trail, a long distance route running east-west from Newport to Fishguard, beginning at the Transporter Bridge in Pillgwenlly and running through Newport City Centre, Rogerstone and Risca.
National Cycle Network Route 49 (Sustrans)	National Cycle Network Route 49 is a long distance route running from Newport to Abergavenny, from its junction with Route 47 (near junction 26 of the M4) following the Brecon arm of the Monmouthshire and Brecon Canal.
National Cycle Network Route 88 (Sustrans)	National Cycle Network Route 88 is part of a proposed coastal route between Newport and Margam, currently the only fully open section through the study area is the Newport to Caerleon route. The proposed Newport-Cardiff cycle route will form part of Route 88 once open, with the Newport section being virtually complete at the time of issue of this report.
Wales Coast Path (Natural Resources Wales)	The Wales Coast Path is a 1,386 kilometre long distance route which runs from Chepstow to Chester, following the Welsh Coastline, its route passes through Monmouthshire, Newport and Cardiff.
The Newport Coast Path (Newport City Council)	The Newport Coast Path is a separately promoted section of the Wales Coast Path through Newport, following the same route.

Route Name and Promoter	Route Description
The Usk Valley Walk (Monmouthshire County Council)	The Usk Valley Walk is a 77 kilometre waymarked long distance footpath, from Caerleon to Brecon.
Sirhowy Valley Ridgeway Walk (Caerphilly County Borough Council)	The Sirhowy Valley Ridgeway Walk is a 42 kilometre waymarked long distance footpath which runs from the Tredegar Park in southwest Newport north to the Aneurin Beavan Memorial in Tredegar.
Capital Walk 59 (Cardiff City Council)	Capital Walk is 59 kilometre route running from Swanbridge in Glamorgan to Peterstone Wentlooge in Newport. It crosses the M4 using the footbridge near New Park farm.
The Cistercian Way (University of Wales, Newport)	The Cistercian Way is a 969 kilometre circular route starting and finishing in Llantarnam, Cwmbran. The route passes through Caerleon, and does not cross the existing M4 or proposed M4.
The Celtic Way (Celtic Way Charity)	The Celtic Way is a 1,161 kilometre route running from Strumble Head in Pembrokeshire to St Michael's Mount in Cornwall. The route visits Caerleon, but does not cross the existing or proposed M4 routes.
Eurovelo Route 1 (Eurovelo)	Eurovelo Route 1: Atlantic Coast Route is a European Cycle Route following the Atlantic coastline of, Portugal, Spain, France, England, Wales, Republic of Ireland, Northern Ireland, Scotland and Norway. This route follows National Cycle Network Route 4 through Newport, and may divert to follow National Cycle Network Route 88 when it is completed.
Eurovelo Route 2 (Eurovelo)	Eurovelo Route 2: European Capitals Route is a European Cycle Route running from Moscow to Galway, passing through the Republic of Ireland, Wales, England, The Netherlands, Germany, Poland, Belarus and Russia. This route is advertised as following either National Cycle Network Route 42 (from Chepstow to Abergavenny and via Route 8 to Holyhead) or National Cycle Network Route 4 to take in Cardiff.
Fourteen Locks Circular Walk (Newport City Council)	This is a 5km circular route starting at the Fourteen Locks visitor centre, running along side the Monmouthshire and Brecon canal, crossing the existing M4 twice, once at Wern Ddu Farm, and also at the crossing of the Crumlin branch of the canal.
Castleton Circular Walk (Newport City Council)	This is an 11.5km circular route starting in Castleton, travelling along footpaths along the Gwent Levels towards Coedkernew. The route joins Church Lane, and crosses the A48 via footbridge, before crossing beneath the existing M4 via an underpass. The route travels uphill to Pen-y-Lan Road, before travelling down Pound Hill, and

Route Name and Promoter	Route Description
	crossing the existing M4 via the New Park Farm footbridge.
Gwent Levels Circular Walk (Newport City Council)	This is a 12km circular walk, starting in Nash. The route travels out of the village and through the Wetlands Centre, before doing a circuit taking in Goldcliff village and returning through the wetlands centre.
Llanwern Hill Circular Walk (Newport City Council)	This is a 5km circular route from Bishton, climbing up towards Llanwern Park farm, before returning alongside the South Wales Main Railway line.
Lodge Hill Walk (Newport City Council)	This is a 5km circular route starting near Lodge Farm, taking in a circular route to the north of Caerleon.
Michaelstone-y-Fedw Circular Walk (Newport City Council)	This is an 8km circular route starting in Michaelstone-y-Fedw, walking northwards alongside the River Rhymney, before returning via Pen-y-Lan.
Redwick Circular Walk (Newport City Council)	This is an 8km circular route which passes through the area to the southwest of Redwick village, walking along the seawall.
Rhiwderin Circular Walk (Newport City Council)	This is a 4.5km circular walk starting in Rhiwderin, taking in a rural area to the north of the A468 Caerphilly Road.
Rhymney River Circular Walk (Newport City Council)	This is a 10km circular walk starting in Michaelstone-y-Fedw, exploring the rural area to the north, passing through Draethen.
Langstone-Penhow Circular Walk (Newport City Council)	This is a 14km circular walk starting in Langstone, walking east towards Penhow and then running north passing along the southern flank of Wentwood.
The Iron Bridge Circular Walk (Newport City Council/Cadw)	This is a 4.5km circular walk starting in Draethen, passing through Coed Craig Ruperra and Ruperra Castle.
Tredegar Fort – Gaer (Newport City Council)	This is a 2.5km walk around the Tredegar Fort – Gaer, immediately to the east of the existing M4 between junctions 27 and 28.
The Eastman Trail at the Great Traston Meadows Nature Reserve (Newport City Council)	This is a 2.9km circular route starting at Pye Corner (Nash), running along Picked Lane and taking in a loop to the South of Fair Orchard.
Fourteen Locks to	This is a 3.9km circular walk starting at Fourteen Locks

Route Name and Promoter	Route Description
Cefn Wood (Newport City Council)	Visitor centre, exploring the area to the northeast.
Rogerstone Welfare Ground and Coed Bedw (Newport City Council)	This is a 3.5km circular walk around the Rogerstone Welfare ground in Rogerstone.
Wentwood Forest (Newport City Council)	This is a 5.5km walk around Wentwood Forest, north of Langstone.
St Julians Park and Wood (Newport City Council)	This is a 3km circular walk starting on Christchurch Road, it follows the footpath north towards the River Usk, crossing beneath the existing M4 at the St Julian's Viaduct, the route then winds back uphill, passing alongside Christchurch Cemetery before crossing the existing M4 using the footbridge adjacent to the St Julians allotment site, and returning to the start along Christchurch Road.
Fourteen Locks to Allt-Yr-Yn Nature Reserve (Newport City Council)	This is a 4km circular walk starting at Fourteen Locks Visitor Centre. The route follows the Monmouthshire and Brecon Canal closely on both its outward and inward legs, crossing beneath the existing M4 where it crosses the Crumlin branch of the canal.
Caerleon and Chepstow Hill (Newport City Council)	This is a 6km circular walk starting in Caerleon climbing up to Catsash Road. The route remains to the north of the existing M4, taking in footpaths through the Celtic Manor golf course.

## 9.3 Discussion and Summary

- 9.3.1** There are a variety of links available for NMUs within the study area. The density of routes is greatest to the north of the existing M4. Overall there are very few Bridleways and Restricted Byways, which limits opportunities for equestrian and cycle users.
- 9.3.2** South of the existing M4, the density of Public Rights of Way for the exclusive use of NMUs is much lower. This probably reflects that most routes having been upgraded to roads with access for all users. The connections provided tend to connect places of residence with places of work.
- 9.3.3** The Steelworks and South Wales Main Railway lines both present major obstructions to North-South routes for NMUs. Consequently most routes tend to run on an east-west alignment.

## 10 Trip Generators

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**10.1.1** For the purposes of this report is assumed that all journeys made by NMUs would start and finish at home, so residential premises are not considered specific trip generators. These are varied and include many of the following:

- a) Places of Worship;
- b) Post Offices;
- c) Shops and Shopping Centres;
- d) Restaurants and Takeaways;
- e) Public Houses;
- f) Bus Stops and Stations;
- g) Railway Stations;
- h) Schools;
- i) Community Centres;
- j) Leisure Centres and Sports Facilities;
- k) Parks and Recreational Areas;
- l) Offices and Industrial Employment Sites;
- m) Allotments;
- n) Tourist sites, monuments and viewpoints;
- o) Long distance footpaths and cycle routes; and
- p) Forest walks and trails.

**10.1.2** Plan 002 included in Appendix B shows the locations of all established trip generators, denoted by type. The plan shows shaded areas, where clusters of trip generators have been identified and are considered to be likely to attract NMUs.

**10.1.3** In general, there is a greater density of trip generators within the urban areas of Newport and Magor when compared with the rural surrounding areas. A number of key clusters surround areas such as Spytty (with Newport Retail Park, Leeway Industrial Estate, Corporation Road and the Newport International Sports Village), around the Steelworks and Gwent Europark, Newport City Centre and in the area surrounding Junction 28 with several large employment sites along with recreational and tourist facilities at Tredegar Park and Tredegar House.



# 11 Desire Lines

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## 11.1 Introduction

**11.1.1** There are two principal types of desire lines: utility desire lines and recreational desire lines. Each has its own needs and requirements, as explained below.

**11.1.2** Utility desire lines are desire lines associated with a direct need. This can be a need to work, shop, attend school or visit specific locations for a specific purpose. This type of desire line is a connection between the place of residence (source) and the location to be visited (destination). Often users will take the perceived quickest route, sometimes this is the route with the shortest distance. For NMUs, these can often be grouped or aligned to follow corridors. Generally, it is this type of desire line which will see users making injudicious crossings of roads, where the risk is considered (by the individual user) to be less than the benefit gained in terms of time or distance. Often the journey is not completely weather dependent but is more likely to be popular when conditions are fine.

**11.1.3** A recreational desire line tends to take the form of circular walking, jogging, running or cycling route, or sometimes a return journey along a given corridor. Generally this type of use is much more informal, often will be done by people who have a detailed knowledge of the area and availability of routes. Unsafe NMU activity can be less prevalent in this user group, with the exception of when a user is unfamiliar with the routes or areas, and comes upon an obstruction which would require the user to turn back or take a risk to pass the obstruction encountered. Often recreational desire lines are developed through promotion, for example a local authority may publish route maps for circular walks, and these routes start to fall into regular use. Often journeys of this type are weather dependent.

**11.1.4** No further distinction is drawn between the two types of desire line, since the Active Travel (Wales) Act 2013 does not distinguish between them for the purposes of Authorities delivering their obligations under the Act. Large scale desire lines, both established and potential are identified on Plan 002, included in Appendix B. An established desire line is considered to be one for which reasonable facilities exist for NMU use. A potential desire line is one for which barriers currently exist, although these barriers may not necessarily preclude its active use. Table 11.1 below identifies the key desire lines that cross the existing M4 route or the proposed new section of motorway.

**Table 11.1 Desire Lines**

<b>Desire Line</b>	<b>Type</b>
<b>Malpas/Bettws to Newport City Centre</b>	Potential
<b>Brynglas to Newport High School</b>	Potential
<b>Goldcliff to Spytty</b>	Established
<b>Magor to Newport</b>	Potential
<b>Newport to Gwent Europark</b>	Potential
<b>Bassaleg/Rogerstone to Tredegar Park and Duffryn</b>	Potential
<b>Gaer/Glasllwch to Bassaleg High School/Pye Corner</b>	Potential
<b>High Cross to Glasllwch</b>	Potential
<b>St Julians to Caerleon</b>	Potential
<b>Crindau/Brynglas to Caerleon</b>	Potential
<b>Rogiet/Caldicot to Magor/Undy</b>	Established
<b>Magor to Gwent Europark</b>	Potential
<b>Bishton to Redwick</b>	Potential
<b>Llanwern Village to Goldcliff</b>	Potential
<b>Langstone to Ringland</b>	Established
<b>Malpas/Bettws to High Cross</b>	Established
<b>Gaer/Maesglas to Tredegar Park and Duffryn</b>	Established
<b>Caerleon to Malpas</b>	Potential
<b>Coldra to Caerleon</b>	Potential
<b>Caerleon to Newport</b>	Established
<b>Lliswery/Somerton to Spytty</b>	Potential
<b>Castleton to Duffryn</b>	Potential
<b>Cardiff to Newport</b>	Potential
<b>St Brides Wentlooge to Duffryn</b>	Potential

## 12 Conflict Points

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### 12.1 Introduction

**12.1.1** Obstacles and obstructions to desire lines can include natural and manmade features, including hills, rivers, busy roads and railways. Accessibility problems can also be significant barriers to movement for those who have special requirements. There are a number of areas in and around the existing M4 route where tactile paving, and/or dropped kerbs have not been provided, or stepped access is the only means of accessing areas.

**12.1.2** Barriers to movement can present major safety issues for some of the most vulnerable road users, either resulting in risky behaviour or avoidance of travel. The latter can be a cause of social isolation. The following are considered to be the key obstacles and obstructions to desire lines within the study area:

- a) Ebbw River;
- b) River Usk;
- c) Crindau Pill;
- d) Malpas Brook;
- e) Monmouthshire and Brecon Canal;
- f) South Wales Main Railway Line;
- g) Western Valley Branch Railway Line;
- h) Welsh Marches Railway Line;
- i) Uskmouth Railway Line;
- j) Steep gradients in and around the study area;
- k) Existing M4;
- l) Junction 27 of the Existing M4;
- m) Junction 26 of the Existing M4;
- n) Junction 25A of the Existing M4;
- o) Junction 25 of the Existing M4;
- p) Junction 23A of the Existing M4;
- q) A48 Cardiff Road;
- r) A48 Southern Distributor Road;
- s) A48 Chepstow Road;
- t) A4051 Malpas Road;
- u) A4042 Malpas Relief Road;
- v) A467;
- w) A449;
- x) Llanwern Steelworks;
- y) A4810; and
- z) Proposed new section of motorway.

**12.1.3** Overall it can be seen that there are a number of barriers to movement. The intersection of these barriers with NMU routes and desire lines are the most likely points of conflict for NMUs. Conflict points can be managed by providing appropriate crossings and routes for NMUs to either avoid the conflict or manage it to an acceptable level of risk.

#### 12.1.4 The conflict points identified with the proposed overall scheme include:

- a) Druidstone Road;
- b) New Park Farm;
- c) Pound Hill;
- d) A48 Cardiff Road;
- e) Church Lane;
- f) Percoed Lane;
- g) Green Lane;
- h) B4239 Lighthouse Road;
- i) Heol Pont-y-Cwccw;
- j) A48 Southern Distributor Road;
- k) Wales Coast Path along River Usk;
- l) National Cycle Network Route 4
- m) Nash Road;
- n) A4810;
- o) North Row;
- p) Bareland Street;
- q) Green Moor Lane;
- r) B4245 Newport Road;
- s) St Brides Road;
- t) Vinegar Hill;
- u) The Elms;
- v) B4245 Caldicot Road;
- w) Bencroft Lane;
- x) Cefn Logell;
- y) A467 Forge Road;
- z) Bassaleg Road;
- aa) Glasllwch Lane;
- bb) Junction 27 (B4591 Glasllwch Crescent/High Cross Road);
- cc) Monmouthshire and Brecon Canal;
- dd) Wern Ddu;
- ee) Junction 26 (A4051 Malpas Road);
- ff) Glebelands Recreation Ground;
- gg) B4596 Caerleon Road;
- hh) Rembrandt Way;
- ii) Firbank Avenue;
- jj) St Julian's Park;
- kk) Christchurch Road;
- ll) B4236 Royal Oak Hill;
- mm) Junction 24 (A449);
- nn) Langstone Court Road;
- oo) Waltwood Road; and
- pp) Junction 23A (A4810).

#### 12.1.5 A number of these conflict points along the existing road network are managed by provision of facilities, such as bridges, underpasses or signalised crossings.

**12.1.6** The proposed new section of motorway intersects with a number of side roads and public rights of way which are identified as carrying NMUs. Due to the motorway classification of the proposed route, which prohibits the use of the motorway by NMUs, at grade crossings cannot be used.

**12.1.7** Therefore, conflict between NMU routes and the proposed new section of motorway would need to be managed by either diverting routes to a suitable crossing point, or providing new grade separated crossing points.

**12.1.8** At junctions with the local road network, there is a likelihood of conflict between NMUs and motorised traffic. The junction forms should be appropriate to the flows of vehicles and the types of NMU that are expected. NMU route design should consider options to minimise the number of potential conflict points at a given junction.

## 13 Views of User Groups and Other Interested Parties

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### 13.1 Overview

- 13.1.1** This chapter sets out the consultation activities as were planned and undertaken with stakeholders as part of the M4 Corridor around Newport NMU Context study. Engagement was undertaken throughout April, May and June 2015.
- 13.1.2** The aim of the NMU consultation exercise was to identify important routes for NMUs, identify potential opportunities to maintain or enhance existing public rights of way, bridleways, and permissive footpaths, and identify any issues or concerns with severance, which could be taken into account as part of the proposals to provide NMU infrastructure as part of the scheme.
- 13.1.3** Stakeholders who may have a potential interest in NMU activity (by pedestrians, cyclists and equestrians) were encouraged to participate in the study. Section 13.2 outlines previous engagement undertaken and Section 13.3 provides a summary of the stakeholders engaged with as part of the current exercise. Section 13.4 sets out the methodology adopted in terms of developing the approach to engagement and activities undertaken.
- 13.1.4** Section 13.5 summarises the results of the consultation exercise, outlining important NMU routes, perceived issues on the network and opportunities arising from the proposed scheme and its complementary measures.
- 13.1.5** The views of key stakeholders have helped to shape the scheme development and will inform future detailed design.

### 13.2 Stakeholders

- 13.2.1** Engagement has been undertaken with organisations with a potential interest in NMU activity in the study area. Engagement has been carried out in accordance with the NMU guidance provided by the Design Manual for Roads and Bridges.<sup>3</sup>
- 13.2.2** The following organisations were contacted, whilst those who provided responses to the consultation at the time of writing this NMU Context Report are identified in Table 13.1:

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<sup>3</sup> Design Manual for Roads and Bridges, Volume 5, Section 2, Part 4, TA91/05 Provision for Non-Motorised Users & Part 5, HD42/05 Non-Motorised User Audits, Department for Transport, February 2005

**Table 13.1 Stakeholder Organisations Contacted by NMU Audit Team**

<b>Stakeholder Group</b>	<b>Organisation</b>	<b>Response to Contact</b>
<b>Local Authorities</b>	Newport City Council	Yes
	Monmouthshire County Council	Yes
	Cardiff City Council	Yes
<b>Town and Community Councils</b>	Bishton Community Council	No
	Caldicot Town Council	No
	Coedkernew Community Council	No
	Goldcliff Community Council	No
	Graig Community Council	Yes
	Langstone Community Council	No
	Llanvaches Community Council	Yes
	Llanwern Community Council	No
	Magor with Undy Community Council	Yes
	Marshfield Community Council	No
	Michaelstone-y-Fedw Community Council	No
	Penhow Community Council	Yes
	Redwick Community Council	No
	Rogerstone Community Council	No
	Rogiet Community Council	No
Wentlooge Community Council	No	
<b>Transport organisations / accessibility bodies / public transport operators</b>	Sustrans	Yes
	British Horse Society	Yes
	Newport Outdoor Group	No
	Newport Local Access Forum	Yes
	Monmouthshire Local Access Forum	No
	Ramblers Association	No
	Welsh Cycling	Yes
	CTC: The National Cycling Charity	Yes
	Newport Olympic Cycling Club	No
	Newport Uskmouth Sailing Club	No
	Arriva Trains Wales	No
	Cardiff Bus	Yes
	Chartered Institute of Logistics & Transport	No
	Public Transport Users Committee for Wales	No
	Stagecoach Bus	Yes
	Newport Bus	No
First Great Western	No	
<b>Community organisations</b>	Gwent Police	Yes
	South Wales Police	No
	Newport Civic Society	Yes
	Wales Council for the Blind	No
	Wales Council for the Deaf	No
	Royal National Institute for the Blind	Yes
	Disability Wales	Yes
<b>Environmental bodies</b>	Natural Resources Wales	Yes
	Newport Wetland Centre	No
<b>Business organisations</b>	Confederation of British Industry	No
	Federation of Small Businesses	No

Stakeholder Group	Organisation	Response to Contact
Other bodies and organisations	Duffryn High School	Yes

## 13.3 Methodology

- 13.3.1** An engagement strategy was adopted aiming to maximise participation with the identified stakeholders. Engagement tools included face to face meetings, telephone interviews and email questionnaires. Engagement took place in early 2015.
- 13.3.2** Face to face meetings were held with the Local Authorities and Sustrans, whilst Natural Resources Wales also took part in Environmental Liaison Group meetings.
- 13.3.3** All other stakeholders were contacted with the aim of participation through telephone interviews, unless face to face meetings were requested.
- 13.3.4** Alternatively, stakeholders were encouraged to respond to emails if they were unavailable to hold a telephone interview, or if they stated a preference to respond by email. For example, some organisations wished to hold wider internal meetings before submitting a coordinated response to the consultation exercise.
- 13.3.5** Contact details were sourced from previous engagement activities as part of the development of the M4 Corridor around Newport Plan, during which time Arup maintained and updated a contact database. Other contact details were sourced from organisation websites. Relevant points of contact were established as part of the initial engagement with stakeholder organisations.
- 13.3.6** In order to gather relevant and useful information, where email addresses were available, stakeholders were provided with background context to the scheme and NMU study. Stakeholders were also sent a plan of the 2014 Preferred Route, and given contact details for the project team undertaking the study. This information was described/shared and/or explained over the telephone where contact via email was not possible.
- 13.3.7** In order to maximise the benefits of the consultation to the study, stakeholders were asked to consider the following four questions, in addition to any other comments they wished to share:
- What routes along the existing M4 Corridor between Magor (J23) and Castleton (J29) do you believe are used regularly, or are promoted for their use?
  - What routes along, near to, or crossing, the protected corridor to the south of Newport are used regularly, or are promoted for their use?
  - Are you aware of any existing issues on the network and perceived problem areas?
  - Subject to appropriate regulations and orders being made, if the existing M4 between Magor (J23) and Castleton (J29) was reclassified as a dual carriageway trunk road (i.e. not subject to motorway regulations and restrictions), what opportunities and/or constraints do you envisage for NMUs?



- 13.3.8** Where stakeholders were not contacted on the first attempt, the project team followed up with telephone calls and reminder emails. All attempts to make contact were recorded using a bespoke communications register.
- 13.3.9** Where responses to the consultation were received, full responses were recorded using a bespoke consultation response record. This has been used as both a tool to share at the earliest opportunity information with the design team, and to inform the preparation of this NMU Context study.
- 13.3.10** Where possible, the project team presented draft solutions for all NMU crossing points along the proposed route of the motorway, which took into account the comments received and considered. Meetings with the local authorities and Sustrans were held in June and July 2015 to present draft NMU proposals, which were subject to discussion. Based on the results of those meetings, designs have been developed to take into account the consultation results and identified needs of individuals and organisations.

## **13.4 Responses Relating to The Proposed M4 Corridor**

- 13.4.1** Those who responded to the consultation exercise provided responses to the questions asked (see Section 13.3) and in some cases shared wider views and opinions relevant to the proposals.
- 13.4.2** Responses have been grouped into the following key themes, and a summary of responses is provided in table 13.2 below:
- a) Locations, routes and connections;
  - b) Reclassification of the existing M4; and
  - c) Other (Data etc.).
- In light that engagement has been undertaken through a range of correspondence, including phone calls, emails and face-to-face meetings, the interviewer has either directly quoted or summarised points to the best of their ability. Direct quotes are identified in inverted commas.
- 13.4.3** A number of locations, routes and NMU crossings were referenced in responses to the consultation. Comments attributed to specific locations are provided below. For convenience, the locations are listed in order of their geography, starting to the west of the M4 route, and moving eastwards.

**Table 13.2 Summary of Consultation Responses Relating to Proposed M4 Corridor around Newport**

Location / Route	Source	Comment
<b>Castleton</b>	Cardiff Bus, Telephone Interview	Cardiff Bus suggests that there are frequent occasions where traffic delays on the M4 will see traffic exit around Newport, adding pressure to the local road network, especially diverted traffic going through the city centre and the A48 SDR. This compounds the general daily traffic congestion hotspots. This is also true for the J29/A48(M) access at Castleton where diverting traffic uses local routes. This can often cause issues around the Newport Road / Cypress Drive junction and will often see a much heavier traffic flow into/out of Cardiff along Newport Road. This then has much wider implications for the bus network in the east of Cardiff.
<b>Druidstone Road / Coal Pit Lane</b>	Newport Council, face to face meeting  British Horse Society, telephone interview	This route crosses the existing M4 Motorway and the A48 to the west of Junction 29. Newport City Council would support measures aiming to maintain route continuity and convenience for NMUs through the retention of the bridge crossings.  The BHS confirm that riding schools/establishments in the Marshfield area cross the M4 to access areas to the north.
<b>Park Farm Bridge and PRow</b>	Newport Council, face to face meeting	This route is promoted for NMu use by Newport City Council, who support it being maintained. A solution to relocate the crossing slightly to the west and allowing it to be maintained has been supported.
<b>Pound Hill / Coedkernew Underpass</b>	Newport Council, face to face meeting	Newport City Council consider Pound Hill an important connection for NMUs. The project team has previously proposed to stop this route up and divert it along an existing track to Coedkernew underpass. However, the diversion length is considered to be too long by Newport City Council, who suggest an alternative proposal to link the route under the motorway at Coedkernew underpass, to the east.  Points to consider include: Reinstatement of the PRow adjoining Pound Hill to maintain pedestrian accessibility to Treetops; Reinstatement of the PRow adjoining the A48 to maintain pedestrian connectivity to Castleton; and Any measures that may be appropriate to ensure the alternative route via Penylan Road/Druidstone Road/Coal Pit Lane can accommodate additional pedestrian, cyclist and equestrian activity.
<b>Berry Hill Farm Lane / Church Lane</b>	Newport Council, face to face meeting	Berry Hill Farm Lane is proposed to be stopped up. Part of Church Lane to the east of Berryhill Farm and the public footpaths linking to it are part of the Castleton Circular Walk promoted by Newport City Council. It is currently proposed that these routes are stopped up. Newport City Council would therefore like to see a footway/footpath provided along the Church Lane diversion (or potentially within the field to the immediate west). Access to properties and the farm at Ty'n-y-brŵyn would also need to be re-provided.
<b>Percoed Lane / Green Lane</b>	Newport Council, face to face meeting	This route is currently part of the promoted Newport to Cardiff Cycleway, funded by the Welsh Government. This strategic route for NMUs will be open in Summer



Location / Route	Source	Comment
	<p>Natural Resource Wales, email correspondence</p>	<p>NRW supports the following principles:</p> <p>‘That a route under the motorway is preferred to a pedestrian bridge.</p> <p>That the new route should not be any further inland than at present.</p> <p>That any design should seek to provide an aesthetic line under the bridge to optimise sight lines.</p> <p>Consideration should be given to re-alignment of the Wales Coastal Path from New Gout northwards along the bund adjacent to the river Ebbw to achieve a better quality experience for users in line with WCP objectives.</p> <p>The Wales Coastal Path currently follows a riverside path south of the Transporter Bridge before passing through an industrial area and then joining the traffic-free National Cycle Network Route 4 to the Solutia nature reserve. The route through the industrial area is currently unsatisfactory due to the poor provision for walkers and the proximity to heavy industrial vehicles. It appears that the route runs close to and parallel with the proposed alignment of the M4.’</p> <p>NRW proposes the following:</p> <p>‘That a new high quality route is constructed for the Wales Coastal Path at this location.</p> <p>That the route provides walking and cycling infrastructure to business on the site.</p> <p>That the new route should be segregated from traffic.</p> <p>That the design should provide options for linking with any future re-alignment of the Wales Coastal Path to the South in line with Wales Coastal Path principles.’</p> <p>NRW recommend that they, along with Newport City Council, are given the opportunity to be involved early on in the design process to help ensure that the best possible solutions are achieved for this high profile route. It will be far easier to take Wales Coastal Path issues into account at this early stage, rather than trying to retrofit a solution once the road design has been firmed up.</p>
<p><b>Tredegar Park Cycle Route</b></p>	<p>Craig Community Council, telephone interview</p>	<p>Sustrans has developed a cycle route around Tredegar Park, however the area around the former golf club has become overgrown and now is perceived to be an unsafe route for pedestrians due to perceived crime.</p>
<p><b>A48 Southern Distributor Road</b></p>	<p>Craig Community Council, telephone interview</p> <p>Gwent Police, email correspondence</p>	<p>The Southern Distributor Road is an important link for cyclists to Celtic Horizons, ONS &amp; Patent Office and surrounding business park as identified by a number of community councils.</p> <p>CTC Cycling Charity confirm it is used regularly for events.</p> <p>Gwent Police identify that the Southern Distributor Road is a busy road and is frequently used by additional motorised traffic diverting from the M4 when there are incidents and delays. This results in frequent conflicts between local and longer distance road users.</p> <p>The objectives of the scheme are to ensure that the junction incorporates any provision that may be appropriate to assist NMUs.</p> <p>The area around Junction 28 is very busy and</p>

Location / Route	Source	Comment
	British Horse Society, telephone interview	dangerous for NMUs. The British Horse Society suggest that equestrians have to cross over the A48 to get to Michaelstone-y-Fedw, a popular riding route.
<b>West Way Road and East Way Road</b>	Newport Council, face to face meeting	Newport City Council confirm that there is no NMU access on these accesses through the Newport Docks.
<b>River Usk</b>	Newport Local Access Forum, telephone interview and face to face meeting	Newport Local Access Forum suggest that routes along the River Usk are well-walked. Newport Local Access Forum suggest that there should be a segregated cycle and footpath on the new bridge crossing to improve east/west connectivity. Sustrans would like further consideration of this. To the south east of the river, Wetlands Reserve Bridleway 'route 5' covers a large part of the Caldicot Levels. The route links Saltmarsh, the Wetlands Centre, Nash and runs along the coastal path past East Usk Lighthouse.
<b>A449</b>	British Horse Society, telephone interview	The A449 has been identified by the British Horse Society and a number of community councils as being a very busy route, which is dangerous for cyclists and there are no crossings for equestrians.
<b>A4810</b>	Newport City Council face to face meeting  Monmouthshire County Council, face to face meeting	There is very limited NMU provision along this route. Newport City Council would welcome any improvement to access to/along the A4810. Newport City Council and Monmouthshire County Council have joint plans, set out in their Local Transport Plans, to extend cycleway provision along the A4810. This route is used by cyclists to access employment including the Tesco Distribution Centre. Monmouthshire County Council have aspirations to establish and/or extend footpath connectivity in this area. Monmouthshire County Council suggest that the proposed interface with a roundabout adjoining the A4810 needs further consideration. Potential to link the National Cycle Network Route 4 south of Newport with the north of the city and to extend the cycleway along the Steelworks Access Road.
<b>Pye Corner / Nash Road / National Cycle Network (NCN4)</b>	Newport Council, face to face meetings	Newport City Council state that the NCN4 route through Solutia could be maintained over the embankment, but need to take into account the Nash Road diversion and maintain the route. The council welcome bridge provision at Pye Corner/Nash Road for NMUs.
<b>Tatton Farm</b>	Newport Council, face to face meetings	Tatton Farm Lane is to be stopped up and Newport City Council suggested they would be content, appreciating this route has limited purpose, with the recreational route not serving a destination. However, access for future management of this land/farm needs to be provided.
<b>Wentlooge Levels and Caldicot Levels (Gwent Levels)</b>	CTC Cycling Charity, telephone interview	CTC Cycling Charity suggests that the Newport Flats and Gwent Levels are used for both events and recreational cycling. All A and B roads are used to a certain extent. Welsh Cycling confirms that these are important routes, and consideration should be given to

Location / Route	Source	Comment
	<p>British Horse Society, telephone interview</p> <p>Sustrans, face to face meeting</p>	<p>any severance of these routes by the proposed route of the new motorway.</p> <p>The British Horse Society confirm that there are a number of new equestrian routes on the Gwent Levels. The key equestrian routes in the area are generally those running north-south, so it would be important to maintain connectivity between the Levels and the higher land and beyond to the woodland areas to the north of the M4.</p> <p>As part of its review of the cycle network<sup>4</sup> on the Newport Gwent Levels, Sustrans concluded that the area offers significant cycle provision for local people and visitors. The size of the area makes it an ideal location for a cycle network aimed at new and novice cyclists whilst also offering something for the dedicated rider.</p> <p>'There is scope within the Gwent Levels to develop a cycle network that will benefit both visitors to the area as well as the local communities. The cycle network should be linked in with the other proposals currently being put forward to develop:</p> <p>Visitor Hubs on the east and west levels, Promotion of the Wales Coast Path, Better use of the Transporter Bridge and Better use the existing network of cycle routes in Newport especially in the Pillgwenlly area.'</p>
<b>North Row / National Cycle Network (NCN4) / Longlands Lane</b>	<p>Newport Council, face to face meetings</p> <p>Monmouthshire Council, face to face meetings</p> <p>Sustrans, face to face meeting</p>	<p>North Row will be promoted by Newport City Council for NMUs.</p> <p>The project team should be aware of bridleway to the south, which should be unaffected by works.</p> <p>Continuity and convenience for NMUs should be maintained through the provision of a bridge crossing.</p> <p>Both the Newport City Council and Monmouthshire County Council have aspirations to extend the local cycleway from North Row, part of the NCN4.</p> <p>Sustrans expect that as part of the construction process this is brought up to the standards set out in the Active Travel Act. This route should be kept open during construction.</p> <p>No vehicular status is afforded to Longlands Lane, with Newport City Council agreeing a TRO.</p> <p>The Whitson &amp; Redwick Bridleway 'route 2' links Redwick, Goldcliff and Green Moor along routes including Longlands Lane.</p>
<b>Bareland Street</b>	Newport Council, face to face meetings	Newport City Council suggested they would be content with a slight relocation of NMU provision to the east of Bareland Street underbridge
<b>Green Moor Lane</b>	Monmouthshire Council, face to face meetings	<p>Green Moor Lane is an important NMU route, providing access to existing and planned employment, residential and allotment areas.</p> <p>The project team proposal to divert NMUs around and over a new crossing over the railway bridge would improve the crossing conditions, however this diversion length is considered unacceptable by Monmouthshire</p>

<sup>4</sup> Newport Gwent Levels: Cycle Network, Sustrans and Newport City Council, 2014

Location / Route	Source	Comment
	<p>Sustrans, face to face meeting</p>	<p>County Council.</p> <p>The County Council suggest re-routing over the bridge crossing that would take NMUs up and across, rather than loop around a dog-leg.</p> <p>In addition, the County Council recommend softening the re-routing of the lane to gradually meet the underbridge crossing next to the railway on both sides to benefit NMUs.</p> <p>Further to this, the council have aspirations to establish and/or extend footpath connectivity between Magor and the employment/residential areas off the A4810 Steelworks Access Road and Glan Llyn via the Green Moor Lane area.</p> <p>The proposed motorway route impacts on the northern area of the allotments at Green Moor Lane. A new area of land for allotments would therefore be required to compensate for this loss and the location of this land requires discussion with the Magor with Undy Community Council which provides the allotments at Green Moor Lane and local landowners. The triangle of land to the south of the existing allotments may be an appropriate area, where improved parking arrangements could be included.</p> <p>There is the potential for a new link/route to the south of Magor, linking to the current promoted routes. This runs along the existing track known as Rush Wall and may help to mitigate the impacts on NMUs in the Green Moor Lane area.</p> <p>In its response to consultation, Sustrans recommend rerouting the existing cycle route on the Llanwern works dual carriageway to pass underneath the road onto Barecroft Common. Magor could then be accessed via the bridge under the railway.</p> <p>To the south of Green Moor Lane, Llandeenny footpath 372/92 is proposed to be stopped up. Monmouthshire County Council has requested further information as to the availability of crossing the steel works access road and the new scheme road via the railway tunnel, to inform as to whether to stop up the path altogether or look for an alternative route.</p>
<p><b>Newport Road</b></p>	<p>Newport Council, face to face meetings</p> <p>Monmouthshire Council, face to face meetings</p>	<p>Newport City Council have aspirations for a cycleway to be provided on Newport Road where it crosses the M4 at Magor.</p> <p>Monmouthshire County Council suggest stopping up PRow 372/69 to the south of Newport Road and replacing it with an alternative route via St Brides Road to the rear of Magor services.</p>
<p><b>St. Brides Road</b></p>	<p>Monmouthshire Council, face to face meetings</p>	<p>The project team has previously proposed to maintain route connectivity through reinstatement of the PRow via St. Brides Road. This achieves a more attractive route to the existing tunnel, which functions as a cattle creep for agricultural access.</p> <p>Monmouthshire County Council stresses that access in the St Brides Road area should be maintained, and have strong desires to maintain current footpaths, objecting to any stopping up. It is considered to be a key link between Magor and areas of amenity importance to</p>

Location / Route	Source	Comment
	British Horse Society, telephone interview	<p>the recreational resources to the north of the motorway. The current proposal is for the extension of the culvert at this location to take the watercourse but it is not designed to provide for NMUs.</p> <p>Monmouthshire County Council suggested that they would prefer if the footpath along St Brides Road is diverted through the Magor Services, providing a link that would supersede the need for improved access through J23a.</p> <p>The Council also suggest extending the pavement on the western side to form a pedestrian access from Magor to the Services.</p> <p>There are issues with public access along these footpaths north of the existing M4. They are not way marked and access is impeded by the presence of electric fencing. The walking experience through the existing underpass is also unpleasant, with the potential for perceived safety concerns. These issues could be exacerbated if the underpass would become increased in length.</p> <p>Use of the maintenance tracks along the northern and southern embankments for NMUs would seem preferable to provide/maintain linkages. This was also suggested by the BHS.</p>
<b>Whitewall and Green Street</b>	Magor with Undy Community, telephone interview	Magor with Undy Community Council identify that these routes are important for cyclists, particularly in linking Redwick with Magor and Summerleaze.
<b>Knolbury Lane</b>	Newport Council, face to face meetings Monmouthshire Council, face to face meetings	Newport and Monmouthshire Councils identify this as a popular equestrian route. The overbridge crossing at this location is to be maintained and extended as part of the proposed scheme.
<b>The Elms</b>	Monmouthshire Council, face to face meetings	<p>The underpass at The Elms should be extended to take the local road and provide a link from the footpath to the north. Safety issues with design and lighting opportunities need to be considered.</p> <p>Residential development is planned for this area and would be likely to put additional pressure on PRow resources, so the maintenance and where possible, improvement, of existing links is a key consideration. Housing site allocations in the adopted LDP lie to the immediate west of the proposed borrow pit at Undy.</p> <p>The proposed masterplan for development south of The Elms indicates a potential pedestrian and cycle link along the Elms.</p>
<b>Bencroft Lane</b>	Newport Council, face to face meetings Monmouthshire Council, face to face meetings	<p>Newport and Monmouthshire Councils identify that this is a frequently used route for NMUs. The councils object to the stopping up of the crossing at Bencroft Lane as this would be likely to put farm traffic on to Elms road and adversely affect NMUs.</p> <p>There are issues with community severance and farm access arising from the current arrangements. There is also a need to maintain farm access from the Red Barn buildings to Green Dairy to the north of the M48 at this location.</p> <p>Access to the farm buildings to the north and maintenance of the connectivity of the PRow network</p>



Location / Route	Source	Comment
		<p>between Undy and the areas to the north could be maintained by retaining the construction access route as a permanent feature to the crossing point at Rockfield Lane/The Elms.</p> <p>There is a lot of evidence of equestrian use on Bencroft Lane accompanied by signage at the junction with the B4245 and stabling at Red Barn.</p> <p>There is also the potential to provide a link from Bencroft Lane onto the proposed roundabout on the M48.</p> <p>A signalised junction on part of Caldicot Road roundabout could be considered to assist with NMU crossings.</p> <p>The Monmouthshire Local Access Forum have concerns that the closure of Bencroft Lane and diversion of traffic onto Elms Road would be detrimental.</p>
<b>B4245</b>	Magor with Undy Community, telephone interview	<p>Links in the Wilcrick Hill area, B4245 Magor Road, are severed by the existing motorway. This has been an historic issue for NMUs.</p> <p>Magor with Undy Community Council identifies that the B4245 Caldicot Road, whilst a busy route, is used frequently by cyclists and equestrians, linking Rogiet and Caldicot.</p> <p>Despite the B4245's frequent use by cyclists, NMU provision between Rogiet and Caldicot is poor, with concerns raised by Magor with Undy Community Council.</p> <p>The project team would aim to ensure that the junction will incorporate any provision that may be appropriate to assist crossing by NMUs. A signalised junction on part of Caldicot Road roundabout should be considered according to Monmouthshire County Council.</p> <p>Consideration needs to be taken of Monmouthshire County Council active travel initiatives in relation to an active travel corridor / connection between Undy and Rogiet.</p>
<b>Junction 23a</b>	<p>Newport Council, face to face meetings</p> <p>Sustrans, face to face meetings</p> <p>Monmouthshire Council, face to face meetings</p> <p>British Horse Society, telephone interview</p> <p>Monmouthshire Local Access Forum, face to</p>	<p>Newport City Council and Sustrans suggest improvements are needed to provide workable solutions for NMUs crossing this area.</p> <p>Monmouthshire County Council seek improved connectivity from Magor to recreational resources to the north of the existing motorway via J23a, including current public footpaths north of the B4245 at Woodland House and around Magor Services. The Local Transport Plan and emerging active travel measures includes improvements to the arrangements at J23a.</p> <p>Monmouthshire County Council suggested that the footpath around the Magor services could be re-routed through the St. Brides underpass, negating the need to improve access through J23a. This underpass would be maintained and extended as part of the proposed scheme and would also be used for construction traffic.</p> <p>The BHS would be keen to see the maintenance tracks at the bottom of the motorway embankments to be used for NMU purposes and provide additional linkages (particularly east of J23a).</p> <p>Monmouthshire Local Access Forum (LAF) identify that the route between Magor and the services roundabout is</p>

Location / Route	Source	Comment
	face meeting	<p>dangerous, and improvements should be made to the footpath link on the west side of St Brides Road through the new tunnel with a link to the services site.</p> <p>The LAF indicated that the subway under the existing M4 with Footpath 372/12 should be retained, with an extension under the proposed new motorway. This is an important link between the Magor and Undy communities. The subway would require the construction of a culvert to accommodate the stream and lighting through the extended tunnel. This response was echoed by the County Council.</p>
<b>Junction 23 / The Elms</b>	Monmouthshire Council, face to face meetings	<p>An underpass at The Elms should consider safety issues with design and lighting opportunities. Monmouthshire County Council seek clarification as to whether a bridge or underpass would be proposed here. Monmouthshire County Council suggest that residential development is planned within the TR111 corridor around The Elms.</p>

## 13.5 Responses Relating to The Existing M4 Corridor

**13.5.1** Also relevant to this exercise is the Welsh Government's proposals for the reclassification of the existing M4 route. The following routes along the existing M4 Corridor between Magor and Castleton were identified by stakeholders as being used regularly by NMU's, or promoted for their use. Table 13.3 below summarises the responses received to the consultation.

**Table 13.3 Summary of Consultation Responses Relating to the Existing M4 Corridor**

Location / Route	Source	Comment
<b>A467 / A468</b>	Graig Community Council, telephone interview	Graig Community Council suggest that Forge Road is narrow and dangerous for pedestrians and cyclists, however, this could be an important route if the correct provision for NMU's was implemented.
<b>Junction 28</b>	Newport Civic Society, telephone interview  Newport Council, face to face meeting  Cardiff Bus, telephone interview	Newport Civic Society suggest that access from Bassaleg is via a very car-centric junction and Graig Community Council suggest that there is a lack of signage, which can cause incidents on the A-road network as people try to navigate the roads and lanes of traffic.  Newport City Council have aspirations, outlined in their Local Transport Plan, to improve access at this location. NCN4 is an important route for cyclists, both commuting and leisure trips, around/through Newport.  Cardiff Bus suggests that public transport movements are adversely affected by capacity constraints at Tredegar Park, Junction 28. Chronic peak time queuing is experienced as vehicles navigate this junction to reach the various local businesses, notably the Office for National Statistics.
<b>Junction 27</b>	Newport Civic Society, telephone interview	Newport Civic Society argue that access from High Cross is reasonable, although the roundabout leaves the NMU in no doubt that the car has the priority
<b>Blaen Y Pant / Malpas</b>	Newport Civic Society, telephone interview	Newport Civic Society suggest the access from Blaen Y Pant/Malpas is an unappealing underpass below the M4 without lighting.
<b>J26 / Monmouthshire and Brecon Canal</b>	Newport Council, face to face meeting	Newport City Council reported that cyclists using the path along the Monmouthshire and Brecon Canal between J26 and J27 often conflict with pedestrians and suggested that part of the existing motorway could be used as a cycling route.
<b>Junction 25</b>	Newport Council, face to face meeting	Newport City Council would likely be supportive of proposed works to improve access at J25, and would welcome any measure that could benefit NMUs at that location. Newport City Council has aspirations to promote a cycling route between Caerleon and Newport City Centre
<b>St Julians</b>	Newport Civic Society, telephone interview	Newport Civic Society suggest the connectivity between the two sides of the M4 in the St Julians and Beechwood area is problematic
<b>A449</b>	Welsh Cycling, telephone interview  British Horse Society, telephone	Welsh Cycling state that the A449 is a very busy route, which is dangerous for cyclists.  The British Horse Society confirm that there are no crossings for equestrians.

Location / Route	Source	Comment
	interview	
<b>Langstone</b>	Newport Civic Society, telephone interview	Newport Civic Society suggest connectivity from Langstone towards the city is probably less relevant for pedestrians, but enhancement for cycling would be welcome
<b>Wilcrick Hill</b>	Newport Council, face to face meeting	Newport City Council confirm that connections in this area are poor and aim to make improvements, querying whether any improvements here might fall outside of the M4 proposals
<b>Usk and Wye Valleys</b>	CTC Cycling Charity, telephone interview	CTC Cycling Charity confirms routes around the Usk and Wye Valleys are popular for cycling
<b>Undy/Rogiet/Caldicot</b>	Magor with Undy Community, telephone interview.	The links to Rogiet and Caldicot are poor for pedestrians and cyclists. Monmouthshire County Council have plans to develop an active travel corridor between Undy and Rogiet. Magor and Undy Community Council suggested that there are heavy levels of traffic through Rogiet.

## 13.6 Responses Relating to Reclassification of the Existing M4 Route

**13.6.1** A number of opportunities and constraints for NMU's were identified by stakeholders with regard to the reclassification of the existing M4 route. These are summarised in Table 13.4 below.

**Table 13.4 Summary of Opportunities and constraints for NMU's**

Location / Route	Source	Comment
<b>Route-wide</b>	Statements attributed to multiple sources	<p>Several stakeholders suggested that there could be an opportunity to adapt the hard shoulder to make provision for cyclists, although concerns were raised about the potential safety of NMUs along the route, in light that the existing motorway would continue to be a busy road with high speeds.</p> <p>It was widely agreed that any potential cycle lane along the M4 should be segregated from the dual carriageway by some form of safety barrier.</p> <p>Stakeholders were particularly concerned as to how a cycle lane on the former hard shoulder would work at junctions, where motorised users would be required to cross the cycle lane to leave the dual carriageway. Some stakeholders including Llanvaches Community Council generally challenged the potential safety of NMUs using trunk roads.</p>
<b>Route-wide</b>	CTC Cycling Charity, telephone interview	<p>CTC Cycling Charity stated that cycling along the existing motorway, even as a reclassified route would not be appropriate, citing that developing a cycle route would be unpleasant for users, and potentially dangerous.</p> <p>Due to the high speed nature of the road, it was widely regarded that any form of bridleway alongside the M4 would be unsafe and unpleasant.</p>
<b>Route-wide</b>	Graig Community	Improvements should generally be made to the signage

Location / Route	Source	Comment
	Council, telephone interview	in the area to reduce potential uncertainty and conflicts, which can lead to accidents.
<b>Route-wide</b>	Gwent Police, email correspondence	Gwent Police raised concerns that the existing M4 would be used as a high speed ring-road and would be a danger for NMUs, should reclassification occur.
<b>Route-wide</b>	Newport Transport, email correspondence	<p>Newport Transport suggested that with regard to cycling it is where possible always best to have clear demarcation to ensure safety is paramount. That said, they suggested there is no reason why all modes cannot interlink and should to ensure multi options for travel are afforded in any new plans. A bus rapid transit measure has been recommended for further consideration.</p> <p>Newport Transport suggest that in general the suggestion being made for reclassification should have no negative effect on local public transport and hopefully the new route would resolve the current M4 congestion with knock on effect which causes gridlock in Newport, which most definitely has a negative impacts to our local services and local business.</p> <p>Should reclassification occur, Newport Transport recommend for between Newport and Cardiff an excellent example from Scotland, where the hard shoulder is being used for bus/coach provision, which is an example of good practice. A specific example given was the A90 motorway between Dunfermline junction and Forth Road Bridge on the way to Edinburgh, where there is a 40mph limited bus lane with clear instruction for buses when passing junctions for vehicles to use this lane for breakdowns. At peak times this arrangement allows the multi capacity vehicle to jump the queuing traffic, thus reducing journey times on bus and thus promoting bus as a viable mode of city to city transport.</p> <p>Newport Transport suggests it would be highly beneficial to include a park and ride facility that would not only serve Newport bound traffic but also Cardiff bound traffic coming from M4 and A449. This facility would allow a reduction in overall traffic on both routes providing bus priority was afforded. An example of a successful model was given as the Halbeath Interchange near Dunfermline in Scotland, serving the Ferrytoll park and ride facility near the Forth Road Bridge. This has a journey length into Edinburgh far exceeding that of distance from Newport to Cardiff and has demonstrated massive growth over the past 13 years since inception. The Ferrytoll facility reached peak parking saturation within its first year and was expanded to 1,000 spaces with now a second facility in Halbeath.</p>
<b>Route-wide</b>	Llanvaches Community Council, telephone interview Newport Civic Society, telephone interview Newport Transport, email correspondence	Llanvaches Community Council suggested that the aim for another motorway should be to relieve the existing levels of congestion so downgrading the existing motorway would not bring benefits. Newport Civic Society and Newport Transport agree, with the latter questioning the benefits from reclassification, suggesting that changing from current motorway to dual carriageway would not help ensure journey times are enhanced by giving route alternatives.
<b>Route-wide</b>	Sustrans	Sustrans has identified the opportunity for a new NMU

Location / Route	Source	Comment
		route along the proposed M4 corridor. This would be separate from the new road, but follow the same route. This would allow users a traffic free route rather than using the existing route from Pye Corner to Redwick via Broadstreet Common. Sustrans state that this route could form the basis of a linear nature reserve providing a buffer between the motorway and the levels.
<b>A4810</b>	Graig Community Council, telephone interview	Graig Community Council identified that there is the potential to link the National Cycle Network Route 4 south of Newport with the north of the city and to extend the cycleway along the A4810.

## 13.7 Summary of other comments

**13.7.1** During the consultation process, a number of consultees made comments relating to the wider M4 CaN scheme. These have been recorded within table 13.5 below.

**Table 13.5 Summary of Opportunities and constraints for NMU's**

Location / Route / Source	Comment
<b>Route-wide</b>	statements attributed to multiple sources  There are general concerns with potential severance caused by the existing M4. Any opportunities to address these as part of future reclassification measures would be welcome.  There is a need to consider impacts on NMUs and connectivity issues during both construction and operation.
<b>Route-wide</b>	Gwent Police, email correspondence CTC Cycling, telephone interview  Gwent Police stressed that the routes regularly used when there is any problem on the M4 in the area of Newport would be A48 Southern Distributor Road, the A4810 and the A48, the A4042 and Malpas Road. These local routes are unable to sustain large volumes of traffic. Longer diversions would be signed from as far as M4 Swansea to use the A465, A40, M50 and M5, and the A470 could also be used with these. It must be remembered that there are major works on the A465 at Brynmawr until summer 2018. Newport will quickly become grid locked due to quantity of vehicle movements during day time periods due to vehicles trying to negotiate the closure of the M4, this has a dramatic effect on movement within Newport City area for all highway users. It must also be remembered that Newport City has some works on their road networks which will be on going for some time due to the electrification of the railways.  Gwent Police and CTC Cycling both suggested the need to consider the potential effects of increased traffic as a result of new road building.

Location / Route / Source	Comment
<b>Route-wide</b> Newport Council, face to face meeting	<p>Newport City Council communicated desire for the DJV to maintain and improve where possible any existing crossings – any severance issues should be addressed in a positive manner, generally supporting the scheme for maintaining crossings.</p> <p>Newport City Council suggested they have the second highest percentage of their PRoW being open, compared to other Welsh Local Authorities, at 88% (PRoW open and accessible).</p> <p>Public Rights of Way are well-used but are not always well connected.</p> <p>Newport City Council confirmed that their active travel proposals are integrated into their Local Transport Plan. Monmouthshire County Council recommended that the Active Travel Act and its guidance informs good design.</p>
<b>Route-wide</b> Welsh Cycling, telephone interview	<p>Welsh Cycling suggests that the connections linking recreational cycle routes are poor. Any isolated or disused roads should be assessed for use for training for performance cyclists. Welsh Cycling query whether there be any potential for a closed road circuit that be created by financial support as mitigation for any adverse impacts on cyclists using the Gwent Levels.</p>
<b>Route-wide</b> British Horse Society, telephone interview Newport City Council, face to face meeting Newport Local Access Forum, telephone interview	<p>The British Horse Society recommends that underpasses or overpasses should be provided for all NMUs where possible. Land to the side of the embankments on the motorway should be protected to carry linking paths between over/underpasses.</p> <p>Bridleway provision in the Newport and Monmouthshire areas along the proposed motorway is limited, and equestrians tend to use well-used footpaths. The British Horse Society suggest that there is a lack of dedicated equestrian routes around Newport, with only 1% of routes for horse riding. The original M4 severs the north/south equestrian routes in the area. Newport City Council is trying to improve provision for equestrians.</p> <p>The Newport Local Access Forum indicates that new multi-user routes are being developed to the west of the River Usk.</p> <p>Carriage driving is popular and the maintenance of links for this activity needs to be considered.</p>
<b>Route-wide</b> Monmouthshire Local Access Forum, face to face meeting	<p>The Monmouthshire Local Access Forum would like to see opportunities for additional public access to be considered for the whole scheme as required by the Active Travel Act 2013. In particular, there is scope for non-vehicle use of the closed part of the M4 and additional crossing points.</p>
<b>B4245</b> Monmouthshire County Council, face to face meeting	<p>Monmouthshire County Council state that as part of the wider walking and cycling network, the scheme could enhance walking and cycling links from Magor to the Wales One Business Park / Brewery alongside the B4245, ideally on both sides of the road. This would reduce the need for NMUs crossing the B road and help connectivity with the rights of way network.</p>
<b>Steelworks</b>	<p>Monmouthshire Council also articulated their desire to</p>

Location / Route / Source	Comment
<b>Access Road</b>	County Council, face to face meeting
<b>Newport City</b>	Newport Civic Society, telephone interview
<b>Numerous Locations</b>	British Horse Society, telephone interview
<b>Wales Coastal Path</b>	Sustrans, face to face meeting

**13.7.2** Newport City Council and Monmouthshire County Council also kindly agreed to share their NMU network GIS data with the project team, to assist with the study.



## 14 Non-Motorised Users Scheme Objectives

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- 14.1.1** The following Scheme Objectives for NMUs are proposed in respect of the M4 Corridor around Newport project, for both the proposed new section of motorway to the south of Newport and its Complementary Measures. To aid identification of the relevant locations, a plan showing the location of the Objectives is included as NMU Context Plan 008 in Appendix E.
- 14.1.2** Provision for pedestrians, cyclists, and equestrians would take due account of design standards, including Active Travel (Wales) Act Design Guidance, Design Manual for Roads and Bridges, and any relevant documents referred to therein.
- 14.1.3** In the context of the specific objectives set out below, all facilities directly provided by the scheme would, within reason, be accessible, attractive for use, coherent, comfortable, convenient, direct, and safe for users to use. All of these parameters should be considered in the overall context of the provision being made, and pre-existent on the surrounding network.

### 14.2 Castleton Interchange

- 1) Ensure attractive, coherent, safe and convenient access is maintained for footpath users in the vicinity of New Park Farm (FP400/11, FP 400/2, FP 400/10, FP 400/8 and FP 400/9).
- 2) Ensure convenient, safe and attractive alternative routes exist for users of the Pound Hill overbridge prior to the stopping up and demolition of the route.
- 3) Ensure a safe, convenient, coherent and accessible route for pedestrians, cyclists and equestrians along the A48 between Castleton village and Cleppa Park.
- 4) Ensure a safe, convenient and attractive route for users of the footpaths near Berryhill Farm (FP 390/15, FP 390/17, FP 390/12 and FP 390/18).
- 5) Ensure a safe, convenient, coherent and attractive route for users of the footpaths in the vicinity of Church Lane and Maerdy Farm alongside the dual carriageway access road to the electronics plants towards Maerdy Farm (FP 390/22, FP 390/21, FP 390/20).
- 6) Ensure a safe, attractive, convenient and coherent route is maintained for pedestrians, cyclists and equestrians using Church Lane as a link between the A48, and area to the north of the existing M4 and the Lighthouse Road and coast.
- 7) Provide a convenient, safe, accessible, comfortable and coherent route for users of the Cardiff-Newport Cycle Route crossing the proposed new section of motorway.

### 14.3 Wentlooge Levels

- 8) Ensure that cyclists, pedestrians and equestrians using the B4239 Lighthouse Road have a safe, convenient and coherent route across the proposed new section of motorway.

- 9) Ensure a convenient, safe and coherent route for users of the Wales Coast Path (FP 412/11) crossing the proposed new section of motorway between the River Ebbw and the B4239 Lighthouse Road.

## 14.4 Port of Newport and River Usk Crossing

- 10) Ensure that cyclists using the A48 Southern Distributor Road have a safe, coherent and convenient route to travel between the Newport Docks entrance and the entrance to the landfill site.
- 11) Ensure a safe, convenient, attractive and coherent route for pedestrians and cyclists using the combined Wales Coast Path (FP 401/4) and National Cycle Network Route 4 where it is diverted alongside the proposed new section of motorway.

## 14.5 Caldicot Levels

- 12) Provide a safe, convenient, attractive and coherent route for pedestrians, cycles and equestrians using Nash Road from Lliswery School towards Pye Corner.
- 13) Provide a safe and convenient means for cyclists and pedestrians to cross Nash Road at its intersection with National Cycle Network Route 4.
- 14) Ensure a safe, convenient and coherent route for pedestrians and cyclists using the facilities provided along the A4810, at the junction with the proposed Glan Llyn link.
- 15) Ensure a safe convenient and coherent route for cyclists, pedestrians and equestrians between Redwick, Llandeenny and Bishton across the proposed new section of motorway.
- 16) Provide a safe, convenient and coherent route connecting Magor town to National Cycle Network Route 4 towards Newport for pedestrians and cyclists.

## 14.6 Magor Interchange

- 17) Provide a safe, convenient and attractive crossing for pedestrians, cyclists and equestrians using Bareland Street crossing the Steelworks Access Road and the proposed new section of motorway to travel along Bareland Street to Bishton Road.
- 18) Ensure a safe, convenient, coherent and attractive route between Magor and Llandeenny for pedestrians, cyclists and equestrians using Green Moor Lane.
- 19) Provide a safe, coherent and convenient route for pedestrians and cycles using the B4245 Newport Road crossing the proposed new section of motorway.
- 20) Provide a safe, convenient and attractive crossing of the A4810 at its proposed junction with the B4245 Newport Road.

- 21) Ensure a safe, convenient route for pedestrians using footpaths (FP 372/69) in the vicinity of Junction 23A to access Magor from the surrounding areas to the north of the existing motorway.
- 22) Ensure a safe, convenient and attractive route for pedestrians using footpaths (FP 372/85, FP 372/86, FP 372/12, FP 372/9, FP 372/13 and FP 372/87) crossing the existing motorway using the Mill Reen Culvert.
- 23) Ensure a safe, convenient and attractive route for pedestrians, cyclists and equestrians using the St Brides Road to cross the existing M4.
- 24) Ensure informal pedestrian routes alongside the existing M4 between St Brides Road and The Elms are maintained, or a safe, convenient, coherent and attractive alternative is provided.
- 25) Ensure a safe, convenient and attractive route for pedestrians, cyclists and equestrians using Knollbury Lane and Grange Road to cross the existing M4 and proposed new route to the north.
- 26) Ensure a safe, convenient and attractive route for pedestrians, cyclists and equestrians using The Elms to cross the existing M4 and the proposed new route to the north.
- 27) Ensure a safe, convenient and coherent route for pedestrians, cyclists and equestrians using Bencroft Lane to cross the existing M4.
- 28) Provide a safe, convenient and attractive crossing of the M4 at the proposed Magor Junction with the B4245, to allow pedestrians, cyclists and equestrians using the existing B4245 to negotiate the proposed junction.
- 29) Provide a safe, convenient and coherent path for users of the undesignated NMU route between Church Road and the B4245 near Bridgend Farm.

## **14.7 Reclassified Existing M4, A48(M) and Remodelled Junction 25**

- 30) Provide safe, convenient and attractive crossing facilities for pedestrians and cyclists using the B4596 Caerleon Road to cross the existing Motorway at Junction 25 of the existing M4.
- 31) Ensure clear signing of prohibitions to be applied to the existing road network to ensure the safety of pedestrians, cyclists and equestrians, ensure signing of appropriate alternative routes is clear, consistent and coherent.
- 32) Maintain, as a minimum, continuity of routes crossing the existing M4 and A48(M).

## 15 Summary and Next Steps

**15.1.1** By accepting this report, and in accordance with HD 42/05, the Welsh Government confirms acceptance of the proposed Scheme Objectives for NMUs, which would be used to audit the development of the design and the timetable for NMU Audits as set out below.

### 15.2 Future NMU Audits

**15.2.1** The proposals for the M4 Corridor around Newport will be assessed in the context of the objectives identified within this report, at a number of stages through the project's life. The following stages are recommended in HD42/05:

- Preliminary design: following the completion of preliminary design, prior to the Stage 1 Road Safety Audit;
- Detailed design: following the completion of detailed design, prior to the Stage 2 Road Safety Audit; and
- Post construction: following completion of construction. This should accompany the Stage 3 Road Safety Audit, and should be completed prior to the undertaking of any Stage 4 Road Safety Audit.

**15.2.2** In order to comply with HD 42/05, and recognising the complex nature of the delivery of the M4 Corridor Around Newport project, the following Audits are proposed:

**Table 15.1. Proposed NMU Audit Stages**

Audit Number	Section	Stage
1	M4 Corridor Around Newport: Proposed M4 Castleton to Magor	Preliminary Design
2	M4 Corridor Around Newport: Reclassified M4, A48(M)	Preliminary Design
3	M4 Corridor Around Newport: Proposed M4 Castleton Interchange	Detailed Design
4	M4 Corridor Around Newport: Proposed M4 Wentlooge Levels	Detailed Design
5	M4 Corridor Around Newport: Proposed M4 Docks and River Usk Crossing	Detailed Design
6	M4 Corridor Around Newport: Proposed M4 Caldicot Levels	Detailed Design
7	M4 Corridor Around Newport: Proposed M4 Magor Interchange	Detailed Design
8	Reclassified Existing M4 and A48(M) (Excluding Junction 25/25a Remodelling)	Detailed Design
9	Caerleon Road and Malpas Relief Road Junction Remodelling	Detailed Design
10	M4 Corridor Around Newport: Proposed M4	Post Construction

Audit Number	Section	Stage
11	Reclassified Existing M4 and A48(M) (Including Junction 25/25a Remodelling)	Post Construction

**15.2.3** In addition to the formal audits described above, informal advice would be given as routine on a regular basis to other members of the design development team, and audits undertaken for temporary works during the construction process, to help ensure the construction phase impacts are managed appropriately and effectively with due consideration of NMU needs.

## 15.3 Declarations

**15.3.1** We confirm that this Context Report has been prepared in accordance with the terms set out in HD 42/05 and that the objectives set out for agreement by the Project Sponsor have been set with due regard for the existing conditions for Non-Motorised Users.

### NMU Audit Leader

X

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Simon Westwood  
NMU Audit Leader

Simon Westwood MEarthSc MSc CEng MICE

### Design Team Leader

X

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Ben Sibert  
Design Team Leader

Ben Sibert BEng CEng FICE MStructE MCIHT

## 16 References

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All links checked 14th September 2015.

## **Appendix A**

### **NMU Themed Context Plan: Accidents and Vehicle Speeds**

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0003 – NMU Context Plan 001a (Accidents and Vehicle Speeds)

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0004 – NMU Context Plan 001b (Accidents and Vehicle Speeds)





**LEGEND**

**Accidents Involving Cyclists**

- Serious (Red square)
- Slight (Yellow square)

**Accidents Involving Pedestrians**

- Serious (Red circle)
- Slight (Yellow circle)

**Road Speed Limits**

- <=30 mph (Green line)
- 40 mph (Light Green line)
- 50 mph (Orange line)
- 60 mph (Red line)
- 70 mph (Dark Red line)

**Surveyed Speed**

- 0 - 30 mph (Green arrow)
- 30 - 40 mph (Light Green arrow)
- 40 - 50 mph (Orange arrow)
- >50 mph (Red arrow)

**Surveyed Direction**

- North (Up arrow)
- East (Right arrow)
- West (Left arrow)
- South (Down arrow)

**Accident Hotspot**  
(Accidents located within 100m of another)

**Proposed Route** (Dashed line)

**Extent of Accident Data (Proposed Route)** (Blue hatched area)

**Extent of Accident Data (Existing Route)** (Blue hatched area)

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction (Enter "None" if applicable)					
Maintenance / Cleaning (Enter "None" if applicable)					
Use (Enter "None" if applicable)					
Decommissioning / Demolition (Enter "None" if applicable)					

ISSUE	MAR 2016	FINAL ISSUE TO WELSH GOV'T	EB	SW	KN
Rev.	Date	Description	By	Chk'd	App'd

Drawing Status	FOR COSTING	Suitability	D1	Project Title	M4 CORRIDOR AROUND NEWPORT
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				Checked	SW
				Approved	KN
				Authorised	BS
				Original Date	17/02/2016
				Extended Date	17/02/2016
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**Client**

**Project Title**  
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ZG\_GEN-DR-EN-0004

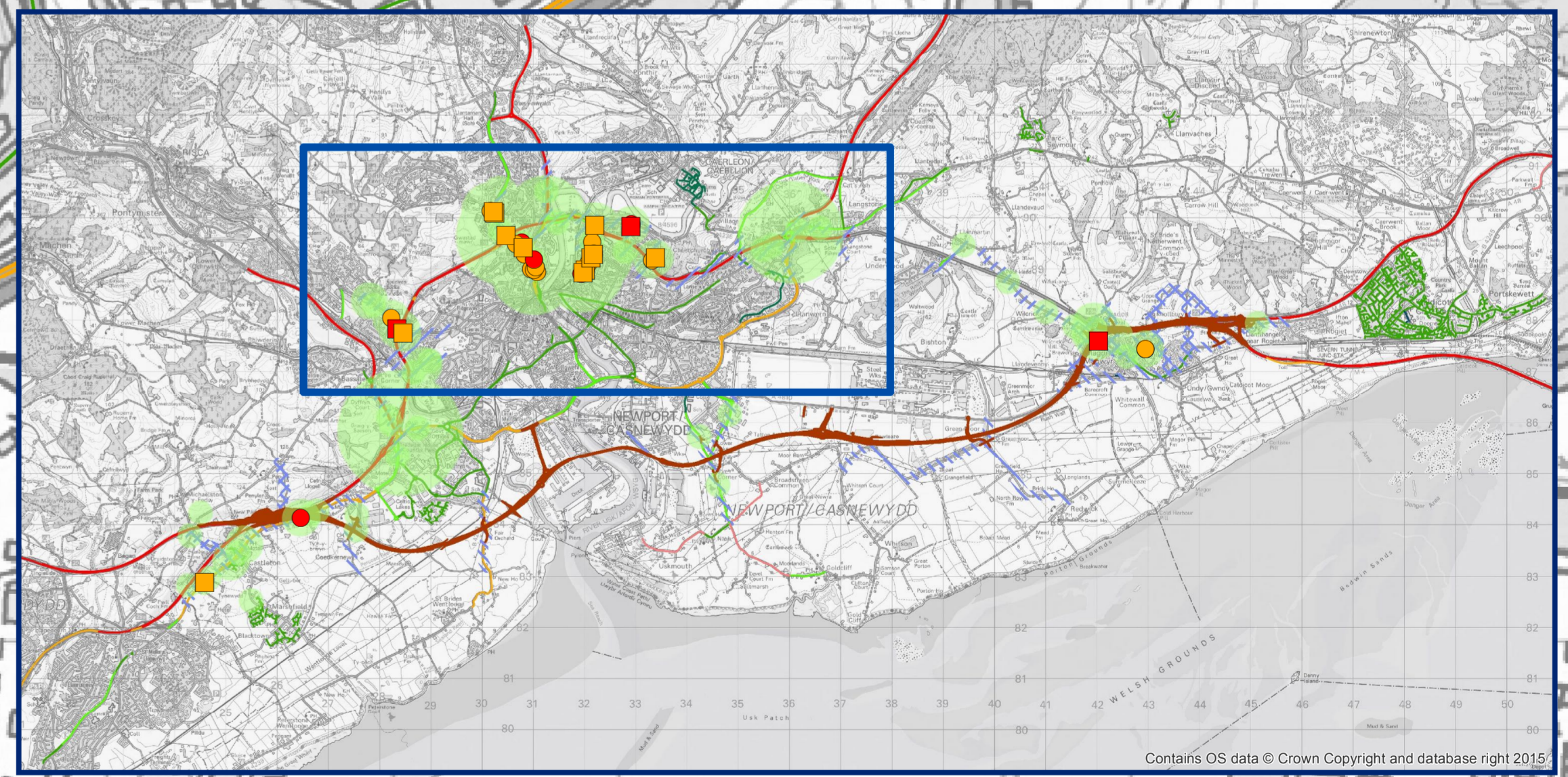
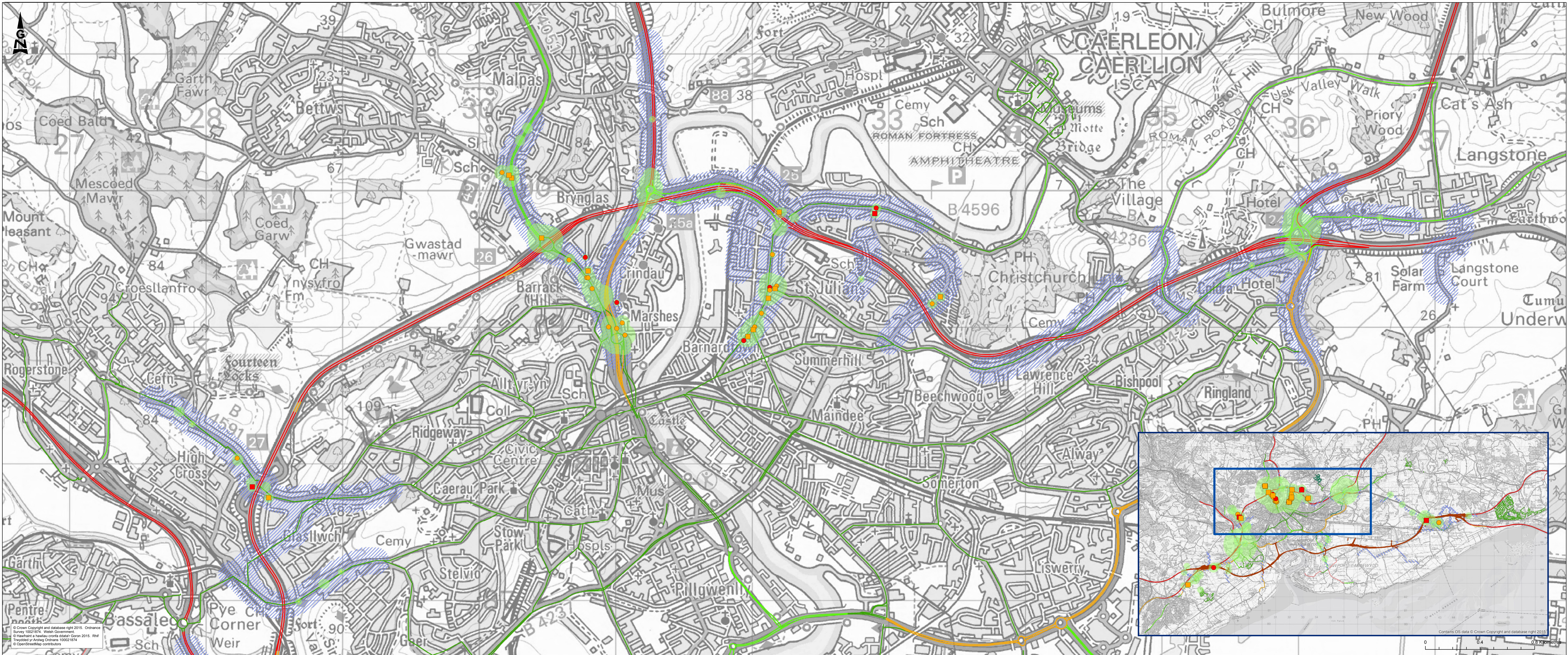
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**Location**

**Type**

**Role**

**Number**



**LEGEND**

**Accidents Involving Cyclists**

- Serious (Red square)
- Slight (Orange square)

**Accidents Involving Pedestrians**

- Serious (Red circle)
- Slight (Orange circle)

**Road Speed Limits**

- <=30 mph (Green line)
- 40 mph (Yellow line)
- 50 mph (Orange line)
- 60 mph (Red line)
- 70 mph (Dark red line)

**Accident Hotspot**  
(Accidents located within 100m of another)

**Proposed Route** (Red line)

**Extent of Accident Data (Proposed Route)** (Blue hatched area)

**Extent of Accident Data (Existing Route)** (Light blue hatched area)

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION			
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)			
Construction (Enter "None" if applicable)			
Maintenance / Cleaning (Enter "None" if applicable)			
Use (Enter "None" if applicable)			
Decommissioning / Demolition (Enter "None" if applicable)			
ISSUE	MAR 2016	FINAL ISSUE TO WELSH GOVT	
Rev	Date	Description	App'd

Project Status	FOR COSTING
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Client	
Originator	EB SW KN
Checked	EB SW KN
Approved	KN
Authorised	BS

**Project Title**  
M4 CORRIDOR AROUND NEWPORT

**Drawing Title**  
001b Accident Hotspots and NMu Accidents - M4 Junction 25

**Scale**  
1:10,000

Designed / Drawn	EB	SW	KN	BS
Date	17/02/2016	17/02/2016	17/02/2016	17/02/2016

**Extended A1**

**Originator**  
M4CaN-DJV-ENM

**Volume**  
ZG\_GEN-DR-EN-0005

**Issue**

**Client**  
Llywodraeth Cymru  
Welsh Government

## Appendix B

### NMU Themed Context Plan: Trip Generators, Desire Lines and Public Rights of Way

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0005 – NMU Context Plan 002 (Trip Generators, Desire Lines and Public Rights of Way)

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0014 – NMU Context Plan 002a

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0015 – NMU Context Plan 002b

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0016 – NMU Context Plan 002c

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0017 – NMU Context Plan 002d

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0018 – NMU Context Plan 002e

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0019 – NMU Context Plan 002f

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0020 – NMU Context Plan 002g

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0021 – NMU Context Plan 002h

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0022 – NMU Context Plan 002i

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0023 – NMU Context Plan 002j

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0024 – NMU Context Plan 002k

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0025 – NMU Context Plan 002l

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0026 – NMU Context Plan 002m

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0027 – NMU Context Plan 002n

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0028 – NMU Context Plan 002o

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0029 – NMU Context Plan 002p

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0030 – NMU Context Plan 002q

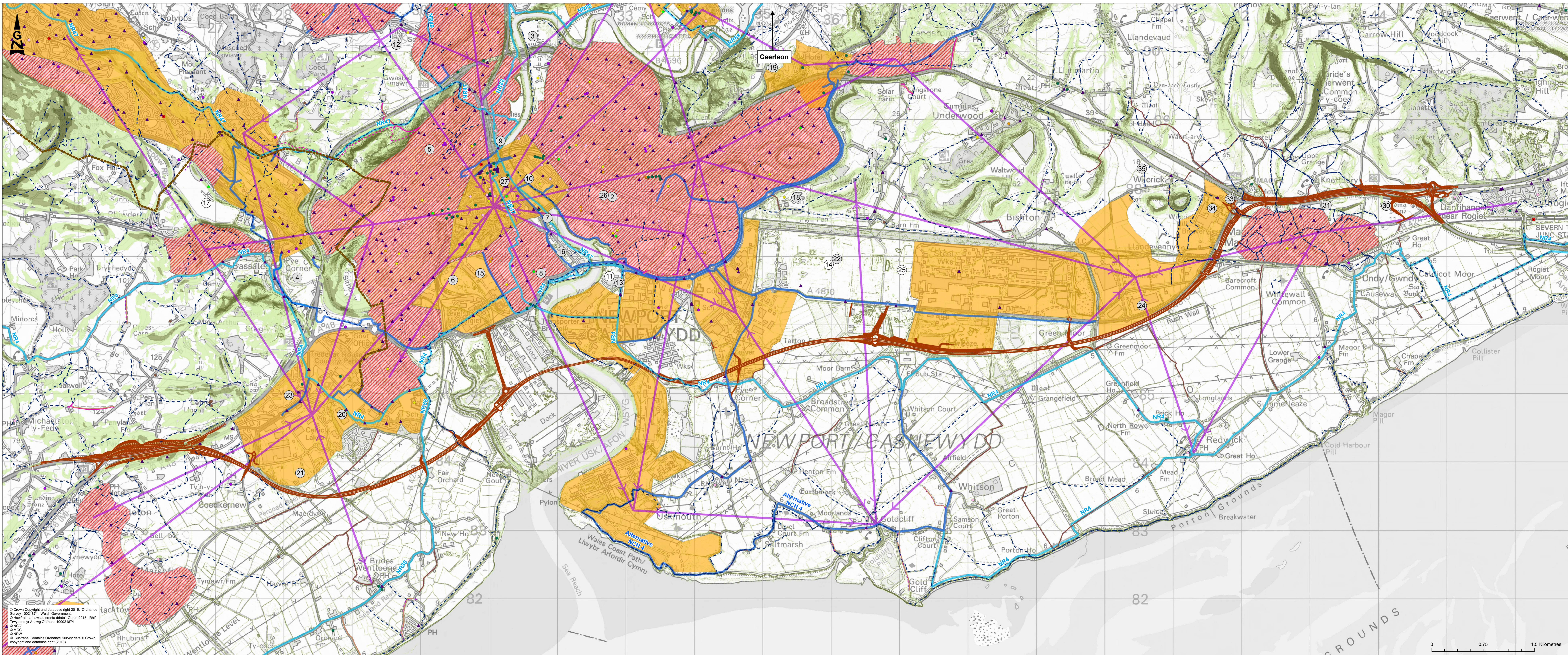
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M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0035 – NMU Context Plan 002v

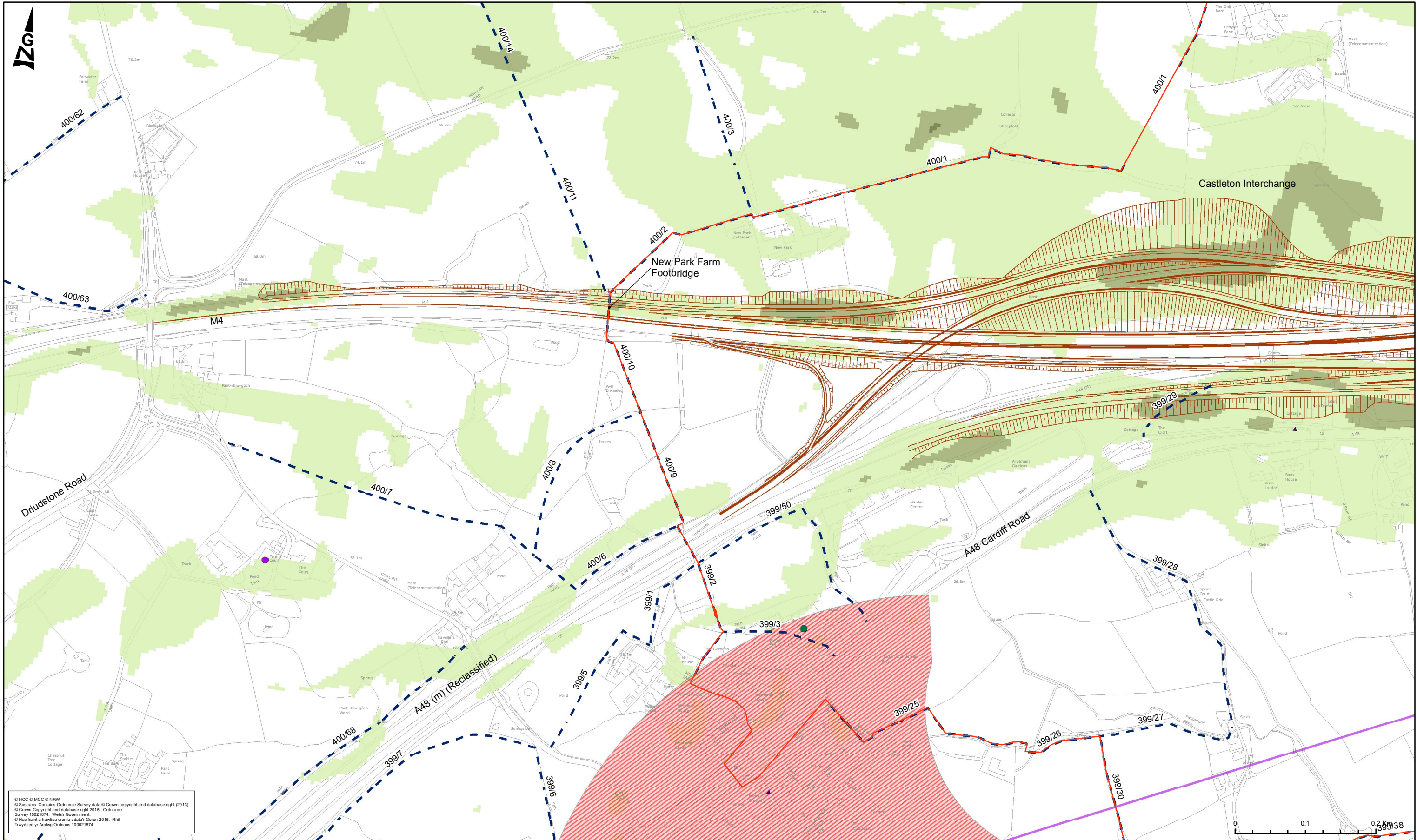


- LEGEND**
- Equestrian Facilities
  - Tourist Attractions
  - Library
  - Sport and Leisure Centres
  - Hospitals
  - Clinic: Health Centre
  - Places of Worship
  - Schools and Colleges
  - Stations
  - Bus Stops
  - ▲ Bus Station
  - Footpaths
  - Riding Routes
  - Byway Open to all Traffic
  - Restricted By Way
  - Bridleways
  - Permissive Bridleways
  - Unclassified Roads
  - Sustrans Local Route
  - Sustrans National Route
  - Sirhowy Valley Walk
  - Desire Lines
  - Trip Generating Clusters
  - Residential Areas
  - Key Development Proposals of Relevance:
  - Other Development Proposals
  - Proposed Route
  - Gradient - Areas > 10%**
  - 10% - 20%
  - 20% - 30%
  - >30%
1. Llanwern Village
  2. Pirelli
  3. Glebelands
  4. Former Tredegar Park Golf Course
  5. Allt Yr Yn Campus
  6. Monmouthshire Bank Sidings
  7. Victoria Wharf
  8. Penmaen Wharf
  9. Former Sainsbury's
  10. City Vizion
  11. Llysaghts Village (Orb works)
  12. Former Betws Comprehensive
  13. Llysaghts Parc
  14. Glan Llyn
  15. Whitehead Works
  16. Old Town Dock Remainder
  17. Former Alcan (Jubilee Park)
  18. Jigsaw Site, Hartridge
  19. Opposite Belmont Lodge
  20. Panasonic
  21. East of Queensway Meadows, South of Glan Llyn
  23. Celtic Springs
  24. Gwent Europark
  25. Llanwern former steelworks, eastern end
  26. Phoenix Park (former Pirelli works) Corporation Road
  27. Friars Walk, Newport
  28. Crick Road, Portskewett
  29. Fairfield Mabey, Chepstow
  30. Rockfield Farm, Undy
  31. Vinegar Hill, Undy
  32. Sudbrook Paper Mill
  33. Wales One, Magor
  34. Quay Point, Magor
  35. Gwent Europark, Magor
  36. Newhouse Farm, Chepstow
  37. Pill Row, Severnbridge Ind Est
  38. Beaufort Park, Chepstow
  39. North East Cardiff (West of Pontprennau)
  40. East of Pontprennau Link Road
  41. St Mellons Business Park
  42. Land at Areas 9-12, St Mellons
  43. Cardiff Gate International Business Park

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION			
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)			
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Maintenance / Cleaning	(Enter "None" if applicable)		
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Decommissioning / Demolition	(Enter "None" if applicable)		
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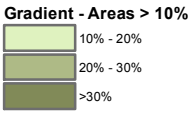
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Client: Llywodraeth Cymru Welsh Government			

Location	Type	Role	Number



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- LEGEND**
- Tourist Attractions
  - Library
  - Sport and Leisure Centres
  - Hospitals
  - Clinic: Health Centre
  - Places of Worship
  - Schools and Colleges
  - Stations
  - Bus Stops
  - Bus Station
  - Sirhowy Valley Walk
  - Footpaths
  - Proposed Route
  - Desire Lines
  - Castleton Circular Walk
  - Trip Generating Clusters
  - Residential Areas
  - Key Development Proposals of Relevance:
    - Other Development Proposals



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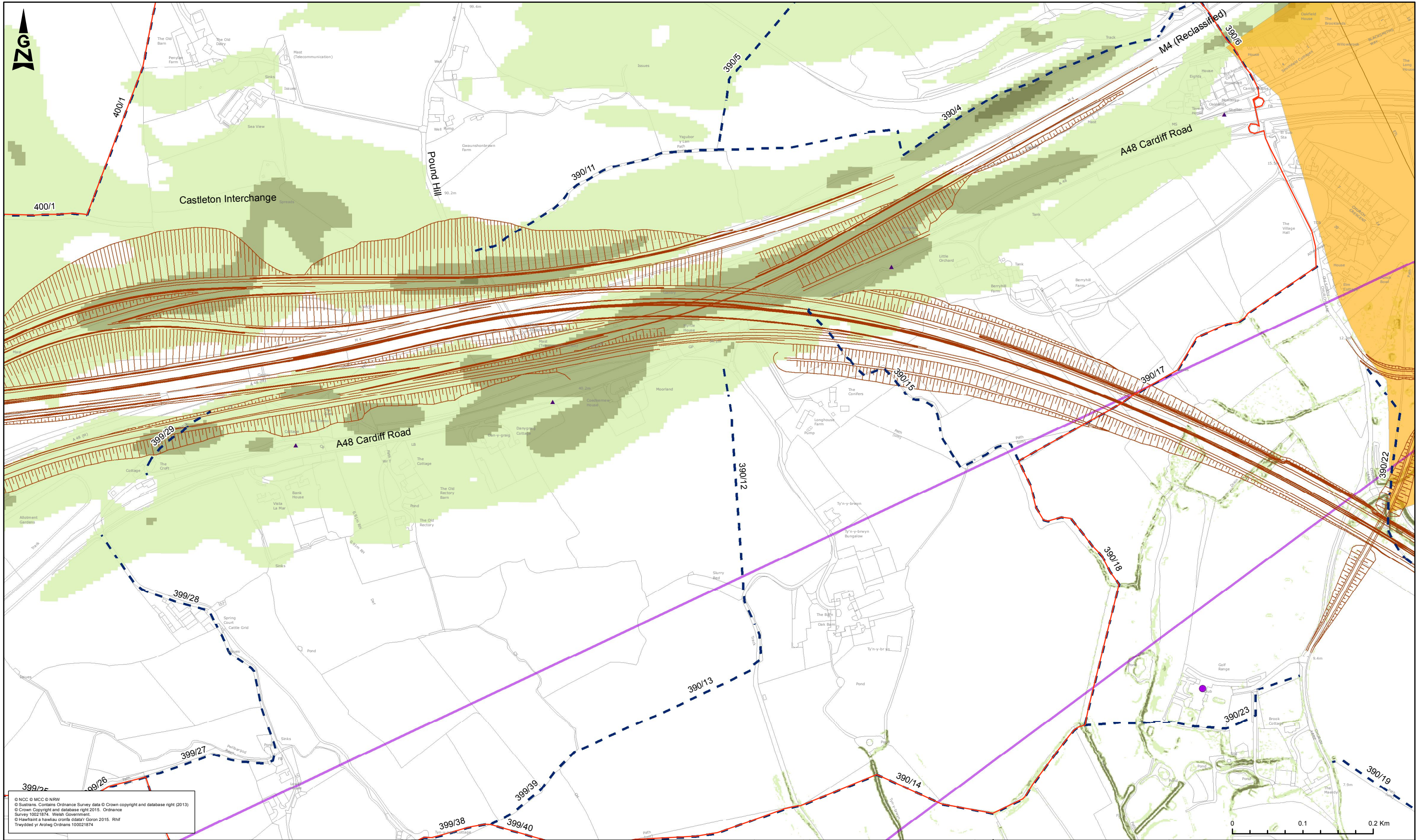
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Project Team:

Client:

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Welsh Government

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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- ▬▬▬▬▬▬ Sirhowy Valley Walk
- - - - - Footpaths
- ▬▬▬▬▬▬ Proposed Route
- - - - - Desire Lines
- ▬▬▬▬▬▬ Castleton Circular Walk
- ▨▨▨▨▨▨ Trip Generating Clusters
- ▨▨▨▨▨▨ Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Rev	Date	Description	By	Chk'd	App'd
MAR 2016	1		FINAL ISSUE TO WELSH GOVT	EB	SW	KN


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

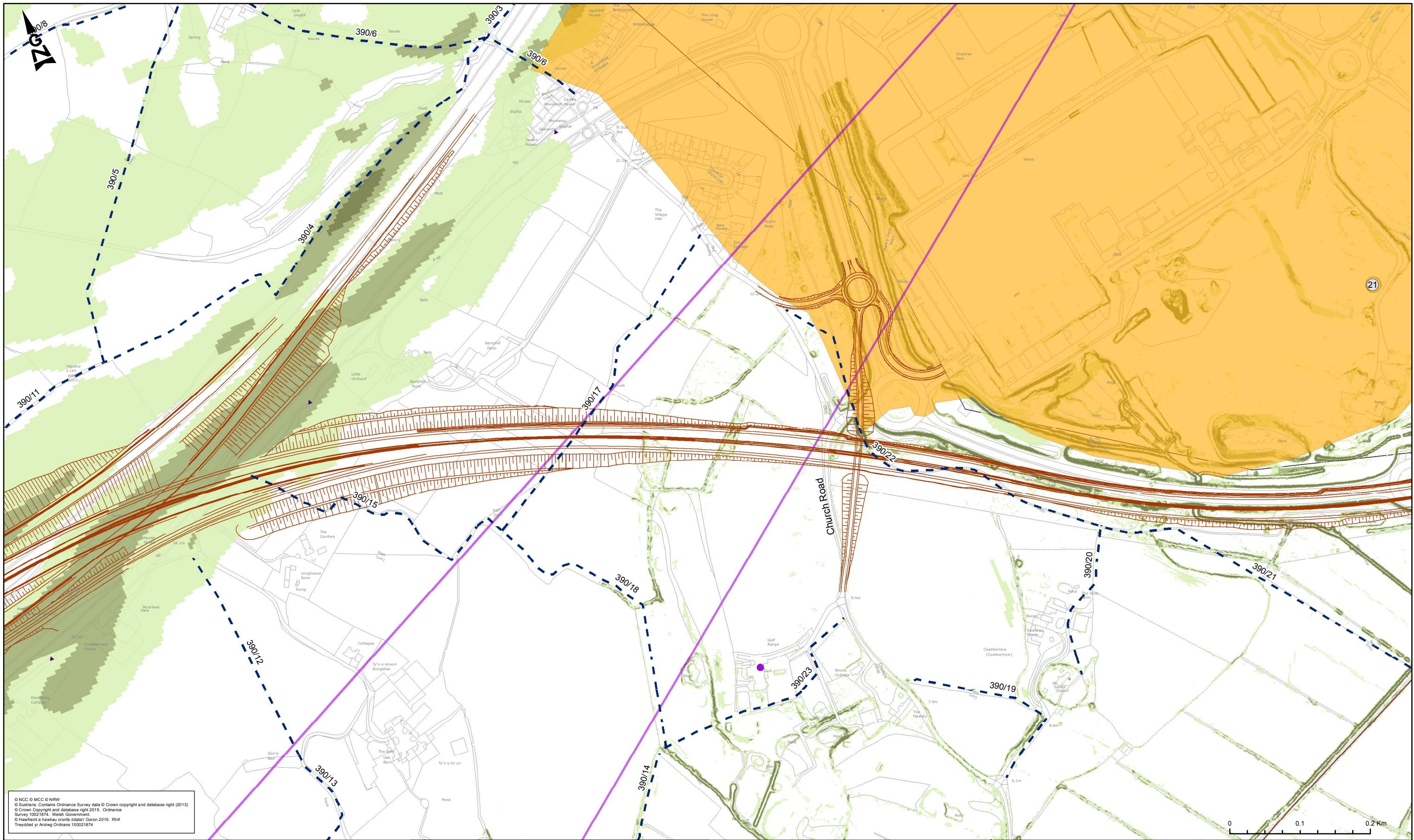
Project Team:

Client:



Llywodraeth Cymru  
Welsh Government

Scale		Designed / Drawn	Checked	Approved	Authorised
1:5,000		EB	SW	KN	BS
Original Size	Date	Date	Date	Date	Date
A3	17/02/2016	17/02/2016	17/02/2016	17/02/2016	17/02/2016
Drawing Number	Project	Originator	Volume	Revision	Issue
002b	M4 CORRIDOR AROUND NEWPORT	M4CaN-DJV-ENM	ZG_GEN-DR-EN-0015		Issue



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**LEGEND**

- Equestrian Facilities
- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- Sirhowy Valley Walk
- Footpaths
- Unclassified Roads
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals


**Gradient - Areas > 10%**

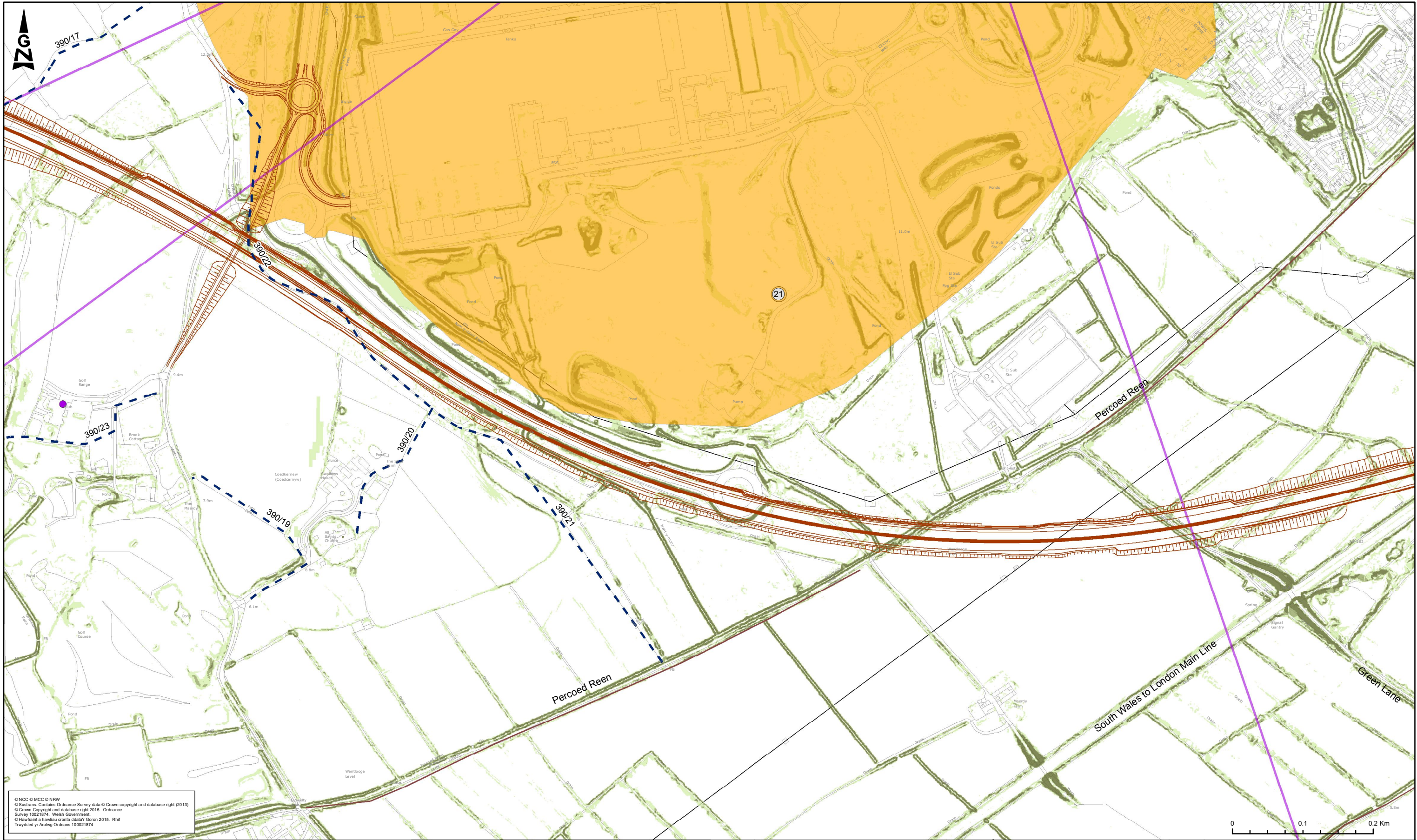
- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chkd	App'd

Drawing Status <b>FOR COSTING</b>		Suitability <b>D1</b>	Project Title <b>M4 CORRIDOR AROUND NEWPORT</b>	
Project Team		Drawing Title <b>002c Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 3</b>		
Scale <b>1:5,000</b>	Designed / Drawn EB	Checked SW	Approved KN	Authorised BS
Original Size <b>A3</b>	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016
Drawing Number		Project		Volume
		<b>M4CaN - DJV - ENM - ZG_GEN - DR - EN - 0016</b>		<b>Issue</b>
Location	Type	Role	Number	

  
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 Welsh Government



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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- Sirhowy Valley Walk
- Footpaths
- Unclassified Roads
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Rev	Date	Description	By	Chk'd	App'd
MAR 2016	1		FINAL ISSUE TO WELSH GOVT	EB	SW	KN


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

Project Team:

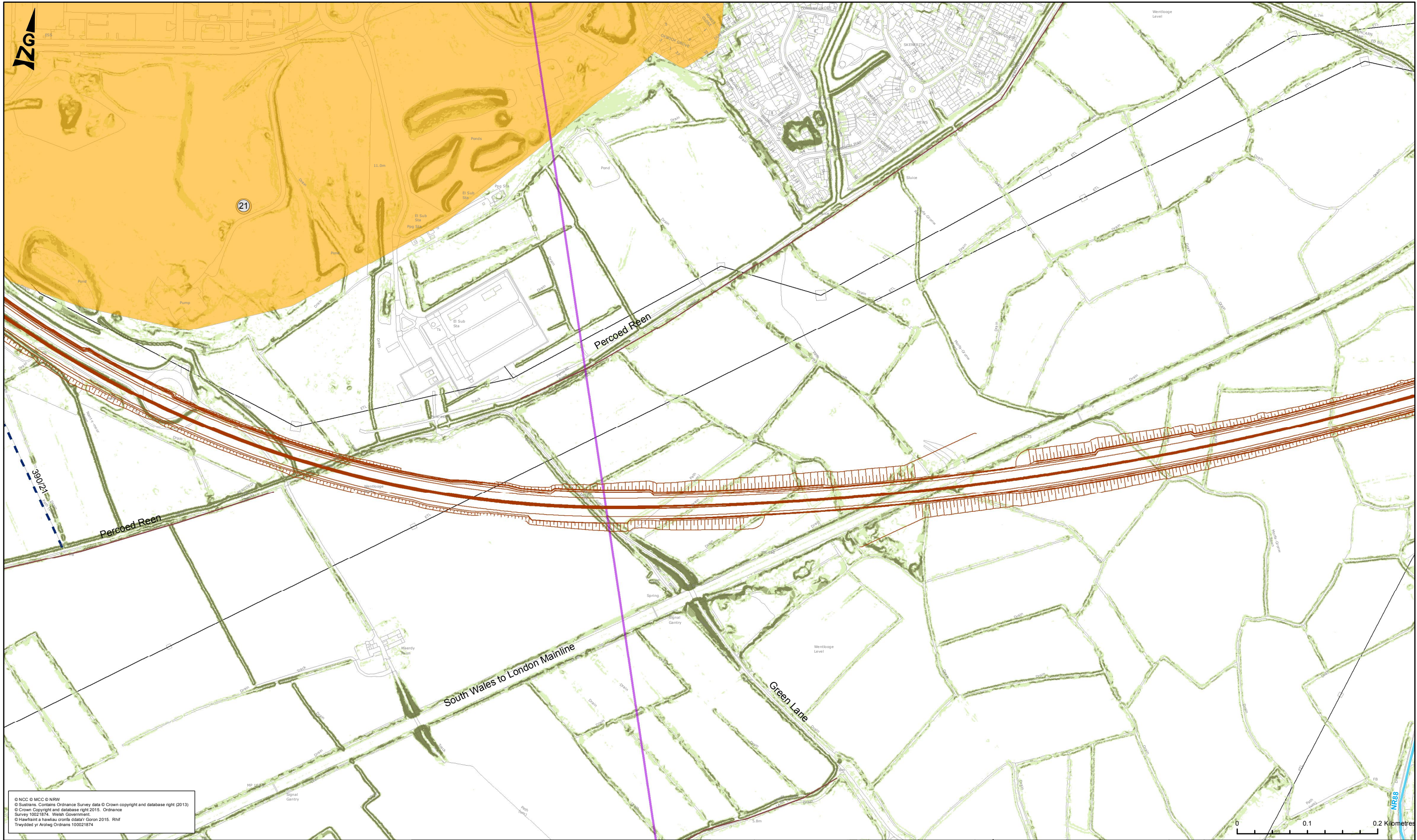
Client:



Llywodraeth Cymru  
Welsh Government

Drawing Title: <b>002d Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 4</b>					
Scale: <b>1:5,000</b>	Designed / Drawn: <b>EB</b>	Checked: <b>SW</b>	Approved: <b>KN</b>	Authorised: <b>BS</b>	
Original Size: <b>A3</b>	Date: <b>17/02/2016</b>	Date: <b>17/02/2016</b>	Date: <b>17/02/2016</b>	Date: <b>17/02/2016</b>	
Drawing Number:	Project: <b>M4Can - DJV - ENM - ZG_GEN - DR - EN - 0017</b>	Originator:	Volume:	Revision:	Issue
Location:	Type:	Role:	Number:		





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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Footpaths
- Unclassified Roads
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Rev	Date	Description	By	Chk'd	App'd
MAR 2016	1		FINAL ISSUE TO WELSH GOVT	EB	SW	KN


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

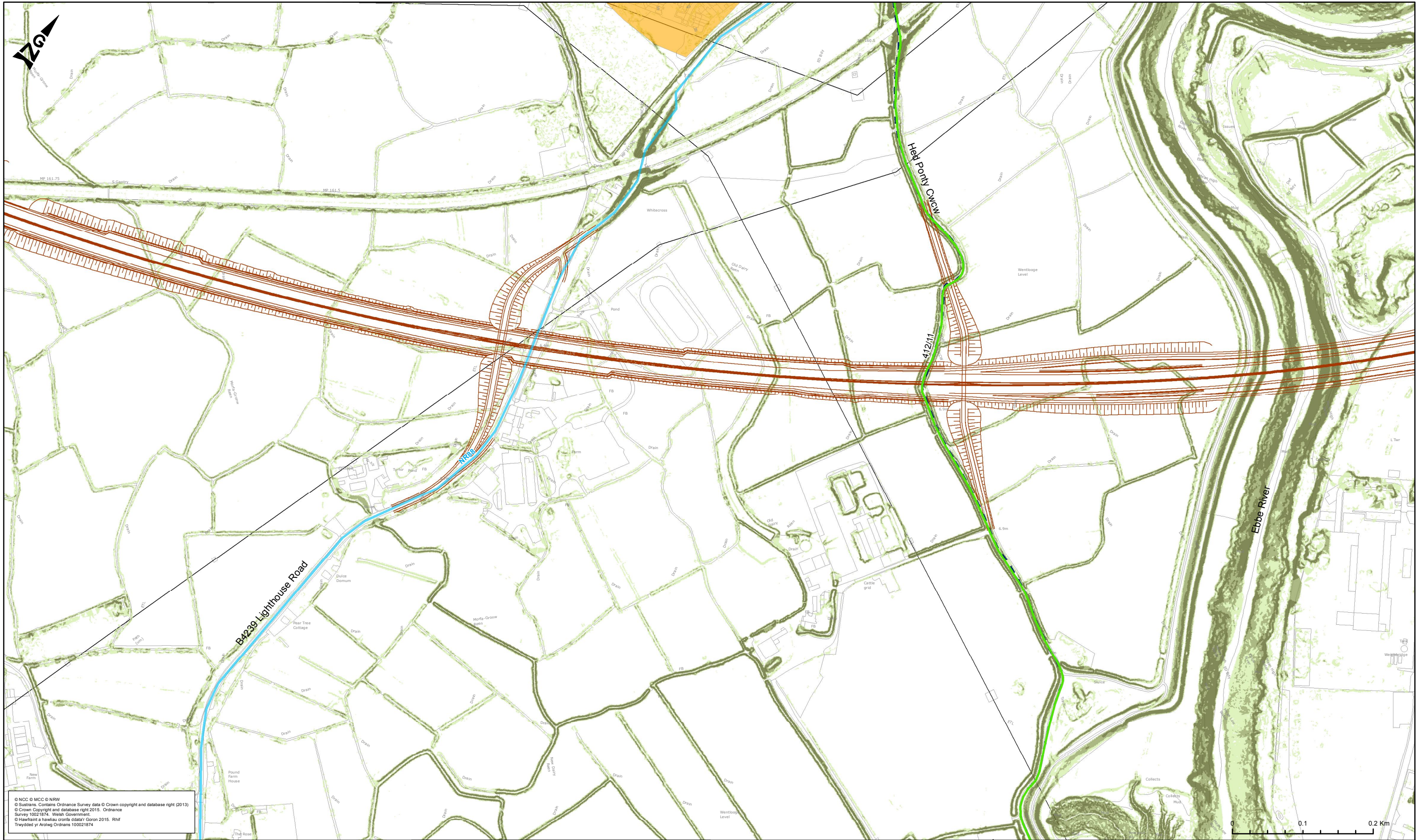
Project Team:

Client:



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Welsh Government

Scale		Designed / Drawn	Checked	Approved	Authorised
1:5,000	EB	SW	KN	BS	
Original Size		Date	Date	Date	Date
A3	17/02/2016	17/02/2016	17/02/2016	17/02/2016	
Drawing Number		Project		Volume	
002e Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 5		M4CaN - DJV - ENM - ZG_GEN - DR - EN - 0018		Issue	
Location	Type	Role	Number		



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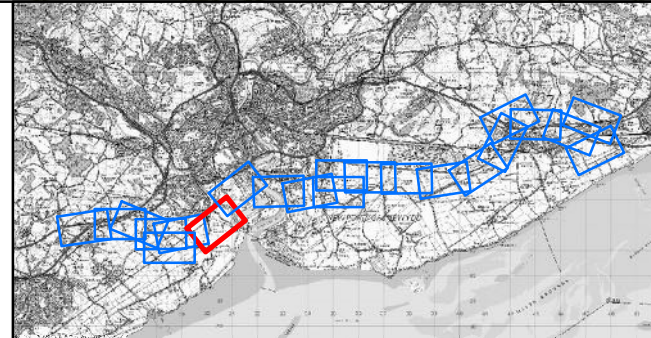
**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- Sirhowy Valley Walk
- Footpaths
- Wales Coastal Path
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

Project Team:

Client:



Llywodraeth Cymru  
Welsh Government

Project Title: <b>M4 CORRIDOR AROUND NEWPORT</b>				
Drawing Title: <b>002f Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 6</b>				
Scale: <b>1:5,000</b>	Designed / Drawn: <b>EB</b>	Checked: <b>SW</b>	Approved: <b>KN</b>	Authorised: <b>BS</b>
Original Size: <b>A3</b>	Date: <b>17/02/2016</b>	Date: <b>17/02/2016</b>	Date: <b>17/02/2016</b>	Date: <b>17/02/2016</b>
Drawing Number:	Project: <b>M4Can - DJV - ENM - ZG_GEN - DR - EN - 0019</b>	Originator:	Volume:	Revision:
Location:	Type:	Role:	Number:	Issue



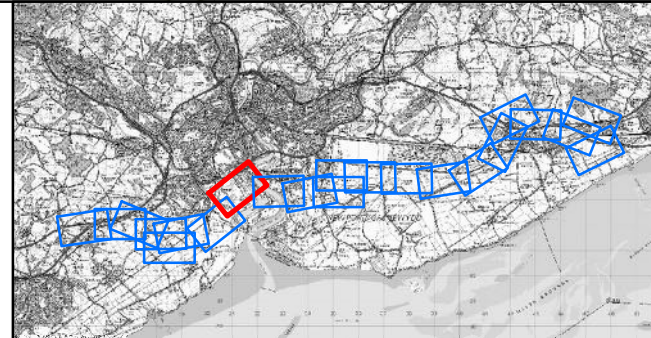
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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Footpaths
- Wales Coastal Path
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%

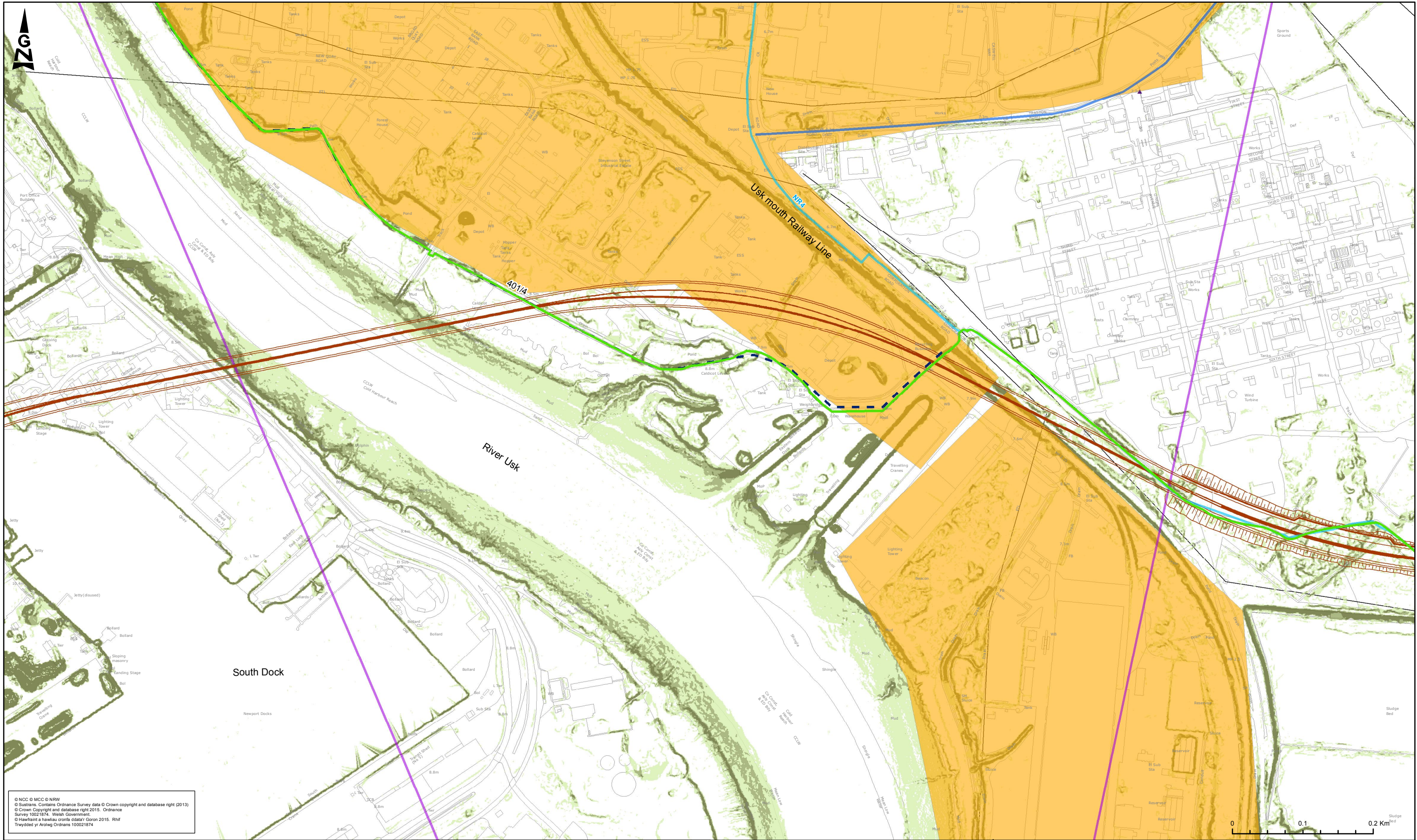


Issue	Date	Description	By	Chk'd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chk'd	App'd

Drawing Status	FOR COSTING
Suitability	D1
Project Title	M4 CORRIDOR AROUND NEWPORT
Project Team	
Client	



Drawing Title		002g Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 7			
Scale	1:5,000	Designed / Drawn	Checked	Approved	Authorised
Original Size	A3	Date	Date	Date	Date
Drawing Number		Project	Originator	Volume	Revision
		M4Can - DJV - ENM - ZG_GEN - DR - EN - 0020			Issue
Location	Type	Role	Number		



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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Footpaths
- Wales Coastal Path
- Sustrans Local Route
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%

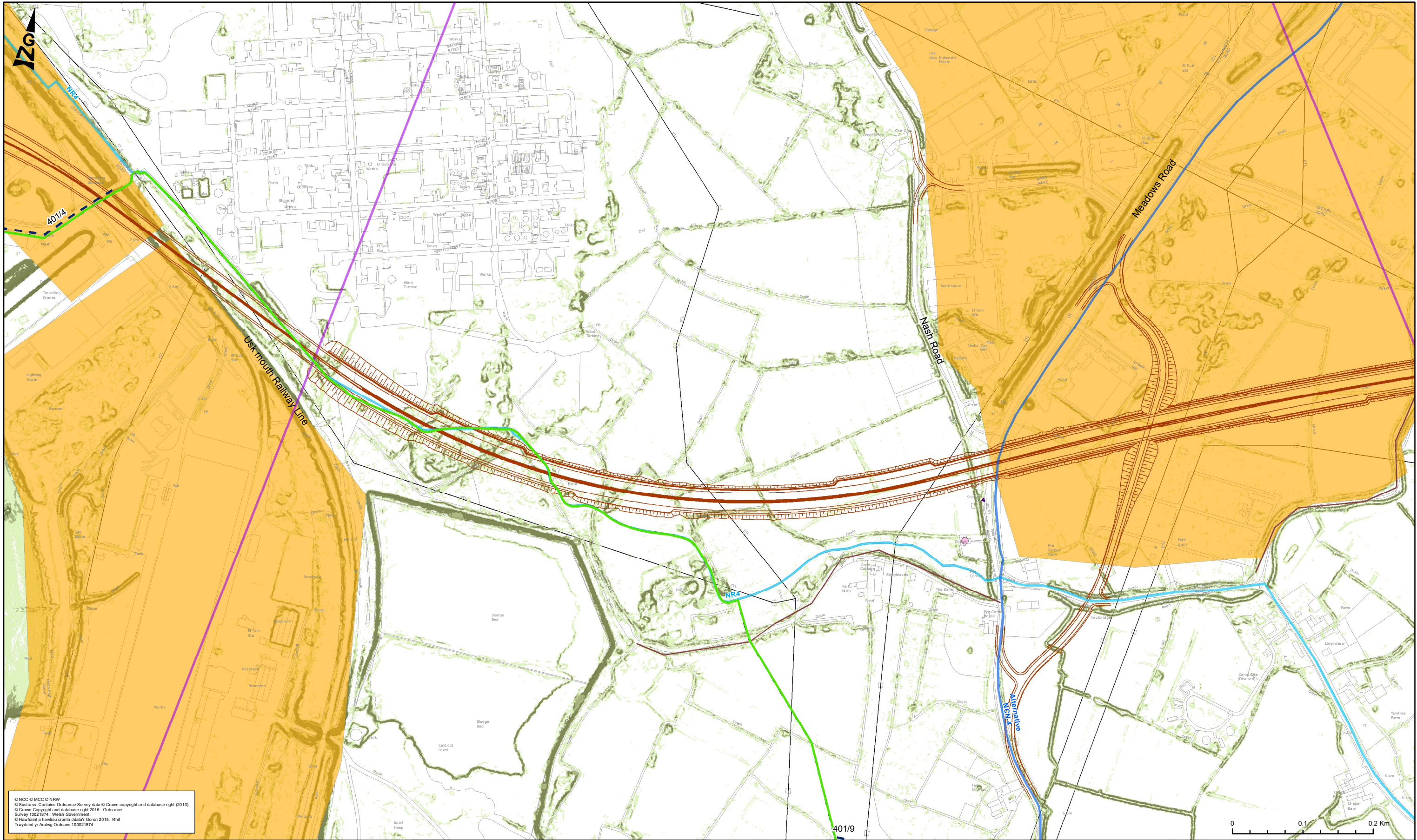


Issue	Rev	Date	Description	By	Chkd	App'd
MAR 2016			FINAL ISSUE TO WELSH GOVT	EB	SW	KN

Drawing Status	FOR COSTING
Suitability	D1
Project Title	M4 CORRIDOR AROUND NEWPORT
Project Team	
Client	



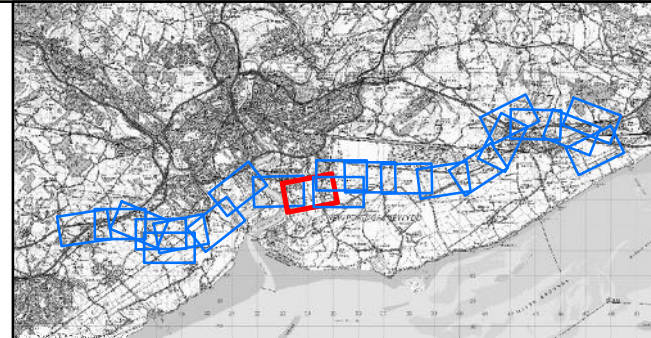
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Original Size	A3	17/02/2016	17/02/2016	17/02/2016	17/02/2016
Drawing Number		Project	Originator	Volume	Revision
		M4Can - DJV - ENM - ZG_GEN - DR - EN - 0021			Issue
Location	Type	Role	Number		



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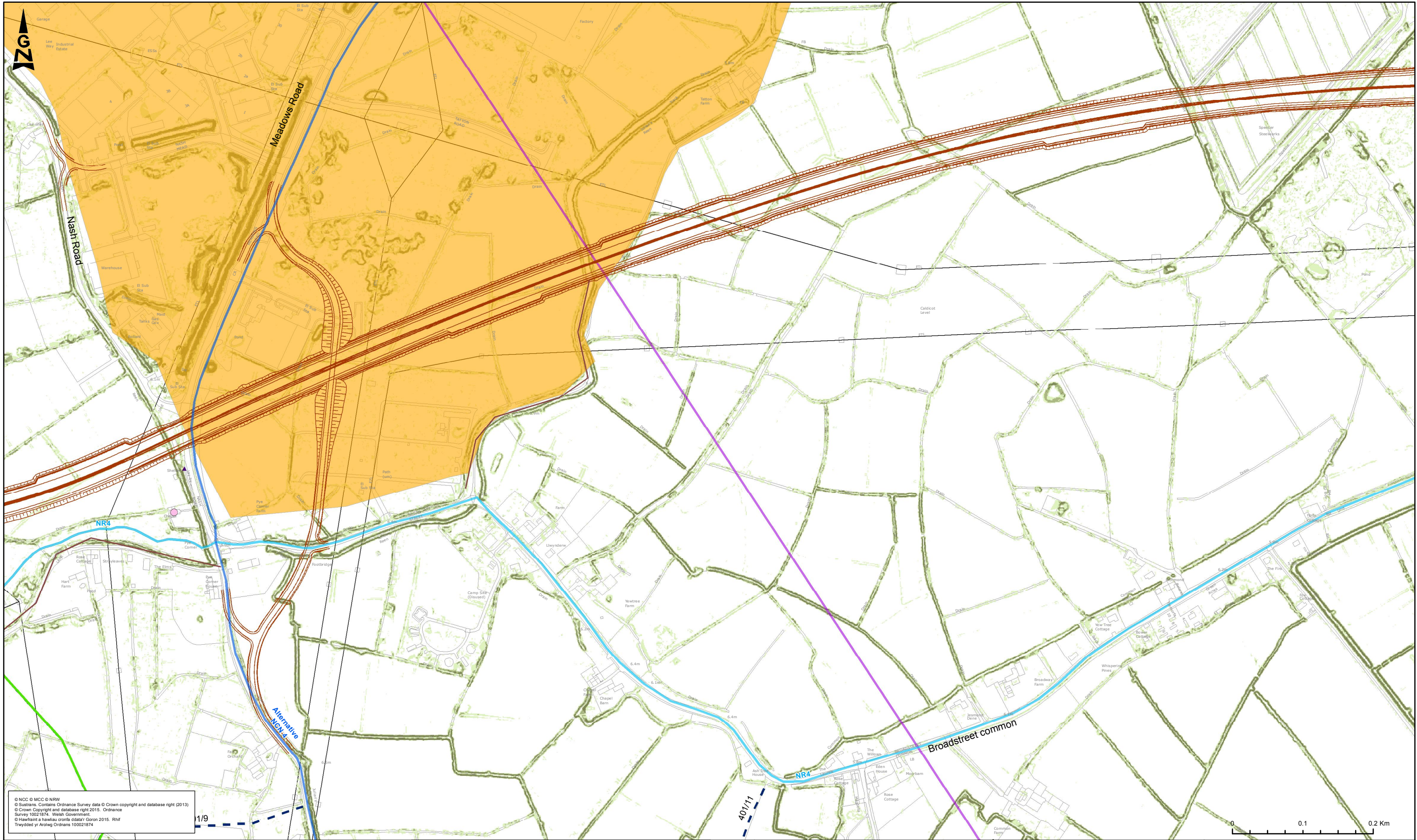
**LEGEND**

● Tourist Attractions	— Sirhowy Valley Walk	○ Key Development Proposals of Relevance:
● Library	— Footpaths	○ Other Development Proposals
● Sport and Leisure Centres	— Wales Coastal Path	
● Hospitals	— Unclassified Roads	<b>Gradient - Areas &gt; 10%</b>
● Clinic: Health Centre	— Sustrans Local Route	10% - 20%
● Places of Worship	— Sustrans National Route	20% - 30%
● Schools and Colleges	— Proposed Route	>30%
● Stations	— Desire Lines	
● Bus Stops	— Trip Generating Clusters	
● Bus Station	— Residential Areas	



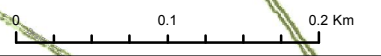
Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chkd	App'd

Drawing Status	FOR COSTING	Suitability	D1	Project Title	M4 CORRIDOR AROUND NEWPORT									
Project Team					Drawing Title	002i Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 9								
Client					Scale	1:5,000	Designed / Drawn	EB	Checked	SW	Approved	KN	Authorised	BS
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					Drawing Number	Project		Originator		Volume		Revision		
					M4Can - DJV - ENM - ZG_GEN - DR - EN - 0022		Llywodraeth Cymru Welsh Government				Issue			
					Location	Type	Role	Number						



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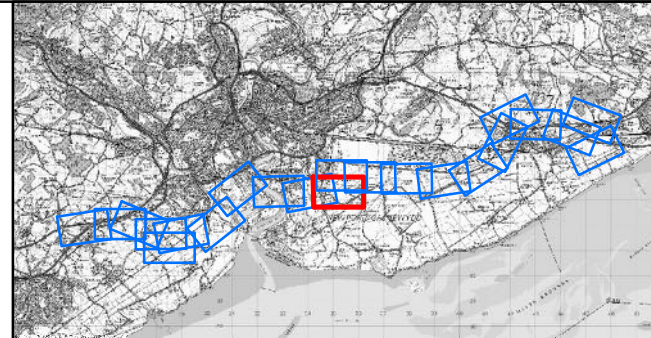


**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Footpaths
- Wales Coastal Path
- Unclassified Roads
- Sustrans Local Route
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:  
Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chk'd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chk'd	App'd

Drawing Status	FOR COSTING	Suitability	D1	Project Title	M4 CORRIDOR AROUND NEWPORT																																																				
Project Team	002j Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 10																																																								
Client	<table border="1" style="width: 100%; font-size: small;"> <tr> <td>Scale</td> <td>1:5,000</td> <td>Designed / Drawn</td> <td>EB</td> <td>Checked</td> <td>SW</td> <td>Approved</td> <td>KN</td> <td>Authorised</td> <td>BS</td> </tr> <tr> <td>Original Size</td> <td>A3</td> <td>Date</td> <td>17/02/2016</td> <td>Date</td> <td>17/02/2016</td> <td>Date</td> <td>17/02/2016</td> <td>Date</td> <td>17/02/2016</td> </tr> <tr> <td>Drawing Number</td> <td colspan="2">Project</td> <td colspan="2">Originator</td> <td colspan="2">Volume</td> <td colspan="3">Revision</td> </tr> <tr> <td></td> <td colspan="2">M4Can - DJV - ENM -</td> <td colspan="2">ZG_GEN - DR - EN - 0023</td> <td colspan="3"></td> <td colspan="3">Issue</td> </tr> <tr> <td>Location</td> <td>Type</td> <td>Role</td> <td>Number</td> <td colspan="6"></td> </tr> </table>						Scale	1:5,000	Designed / Drawn	EB	Checked	SW	Approved	KN	Authorised	BS	Original Size	A3	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016	Drawing Number	Project		Originator		Volume		Revision				M4Can - DJV - ENM -		ZG_GEN - DR - EN - 0023					Issue			Location	Type	Role	Number						
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Original Size	A3	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016																																																
Drawing Number	Project		Originator		Volume		Revision																																																		
	M4Can - DJV - ENM -		ZG_GEN - DR - EN - 0023					Issue																																																	
Location	Type	Role	Number																																																						
 Llywodraeth Cymru Welsh Government																																																									



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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- Sirhowy Valley Walk
- Footpaths
- Sustrans Local Route
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chkd	App'd

Drawing Status: **FOR COSTING**

Project Team:

Client:

**Llywodraeth Cymru  
Welsh Government**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

Drawing Title: **002k Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 11**

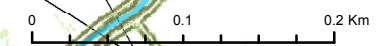
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Original Size	Date	Designed / Drawn	Checked	Approved	Authorised
A3	17/02/2016	EB	SW	KN	BS

Drawing Number: **M4Can - DJV - ENM - ZG\_GEN - DR - EN - 0024**

Project: **M4Can - DJV - ENM - ZG\_GEN - DR - EN - 0024**

Volume: **Issue**





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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

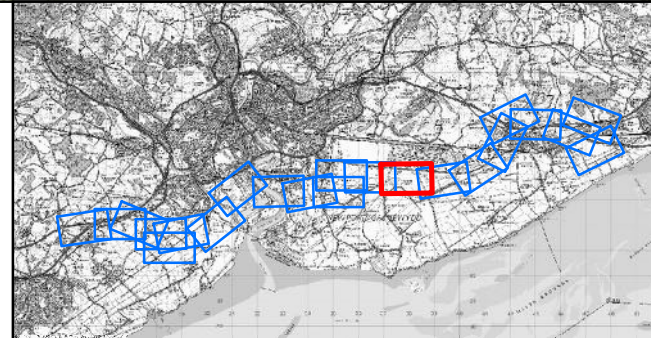
- Sirhowy Valley Walk
- Sustrans Local Route
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%

**Key Development Proposals of Relevance:**

- Other Development Proposals



Issue	Rev	Date	Description	By	Chk'd	App'd
MAR 2016	1		FINAL ISSUE TO WELSH GOVT	EB	SW	KN


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

Project Team:

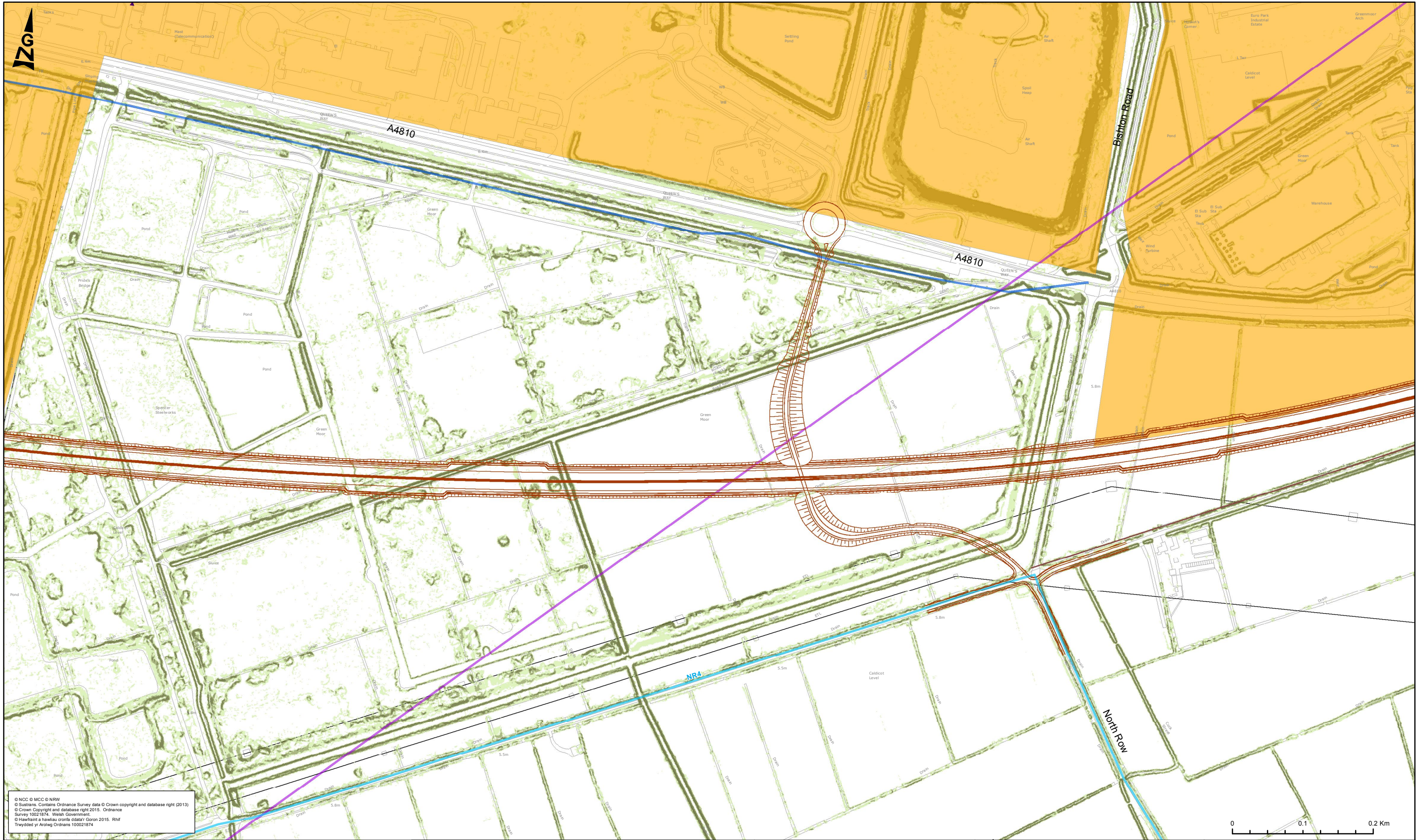
Client:



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Welsh Government

Drawing Title		Scale		Designed / Drawn	Checked	Approved	Authorised
002! Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 12		1:5,000		EB	SW	KN	BS
		Original Size	Date	Date	Date	Date	Date
A3	17/02/2016	17/02/2016	17/02/2016	17/02/2016	17/02/2016	17/02/2016	17/02/2016
Drawing Number		Project	Originator	Volume	Revision		
M4CaN - DJV - ENM - ZG_GEN - DR - EN - 0025					Issue		
Location	Type	Role	Number				





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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Unclassified Roads
- Sustrans Local Route
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chk'd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN

Drawing Status	FOR COSTING
Suitability	D1
Project Team	
Client	

**Project Title**  
M4 CORRIDOR AROUND NEWPORT

**Drawing Title**  
002m Trip Generators, Desire Lines and Obstacles (% Gradient)  
Sheet 13

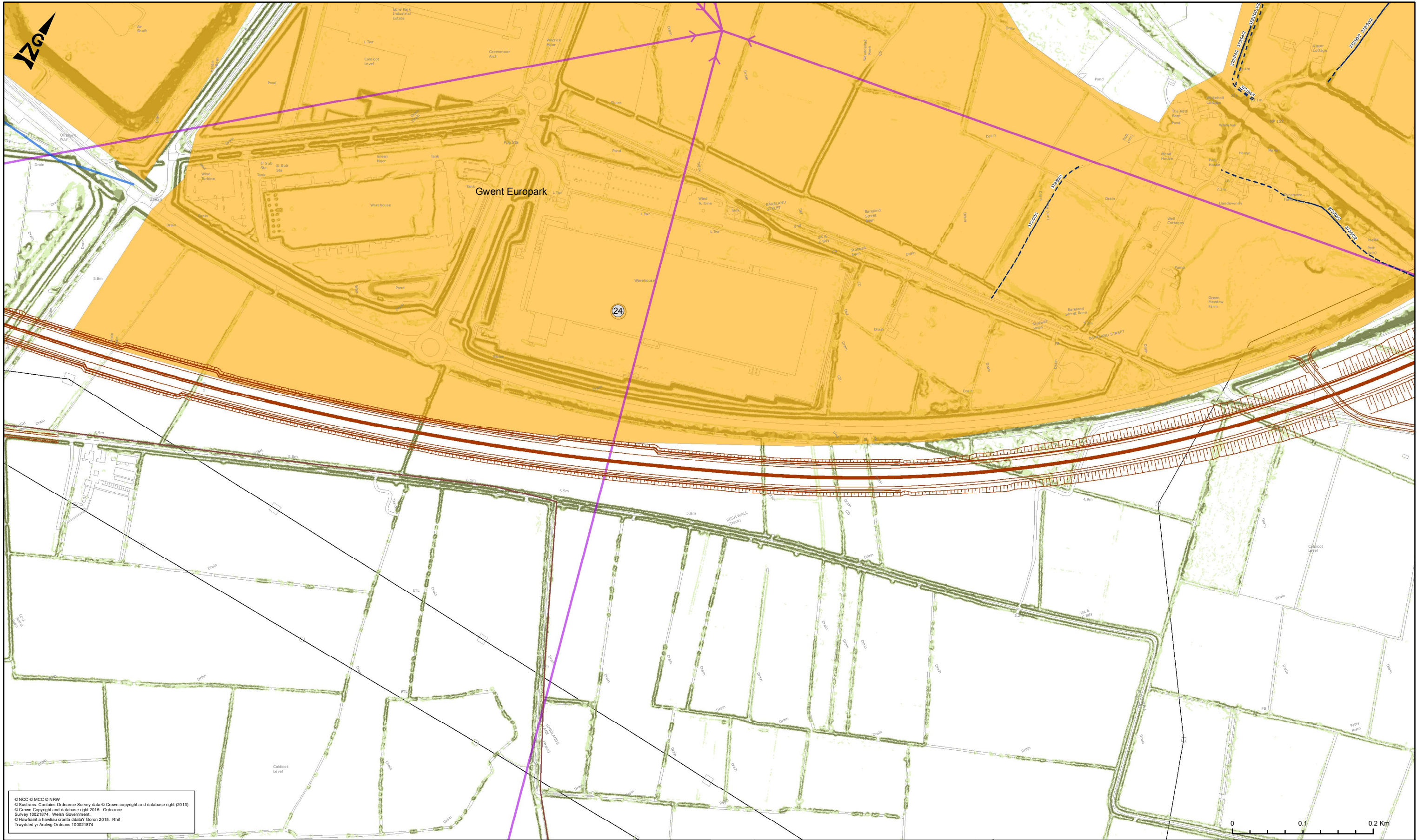
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Checked	SW
Approved	KN
Authorised	BS

Original Size	A3
Date	17/02/2016
Date	17/02/2016
Date	17/02/2016
Date	17/02/2016

**Project** | **Originator** | **Volume**  
 M4Can - DJV - ENM - ZG\_GEN - DR - EN - 0026

**Issue**





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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- Bus Stops
- Bus Station
- Sirhowy Valley Walk
- Footpaths
- Unclassified Roads
- Sustrans Local Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
  - Other Development Proposals

**Gradient - Areas > 10%**

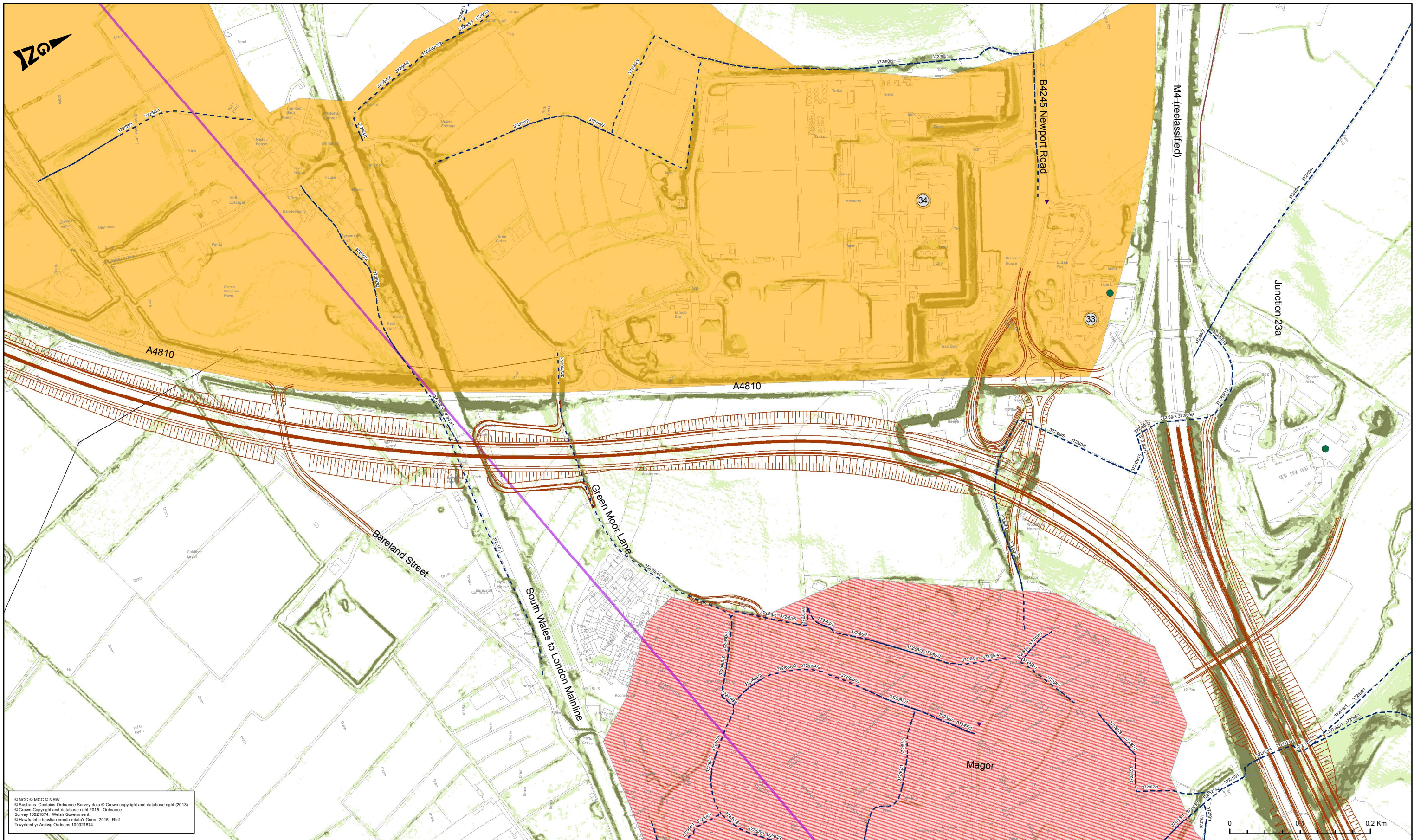
- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chkd	App'd

Drawing Status	FOR COSTING	Suitability	D1	Project Title	M4 CORRIDOR AROUND NEWPORT
Project Team					
Client					
Drawing Title	002n Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 14				
Scale	1:5,000	Designed / Drawn	EB	Checked	SW
Original Size	A3	Date	17/02/2016	Date	17/02/2016
Drawing Number	Project		Originator	Volume	Authorised
	M4Can - DJV - ENM - ZG_GEN - DR - EN - 0027				BS
	Location	Type	Role	Number	Revision
					Issue

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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- Sirhowy Valley Walk
- Footpaths
- Unclassified Roads
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%

**Key Development Proposals of Relevance:**

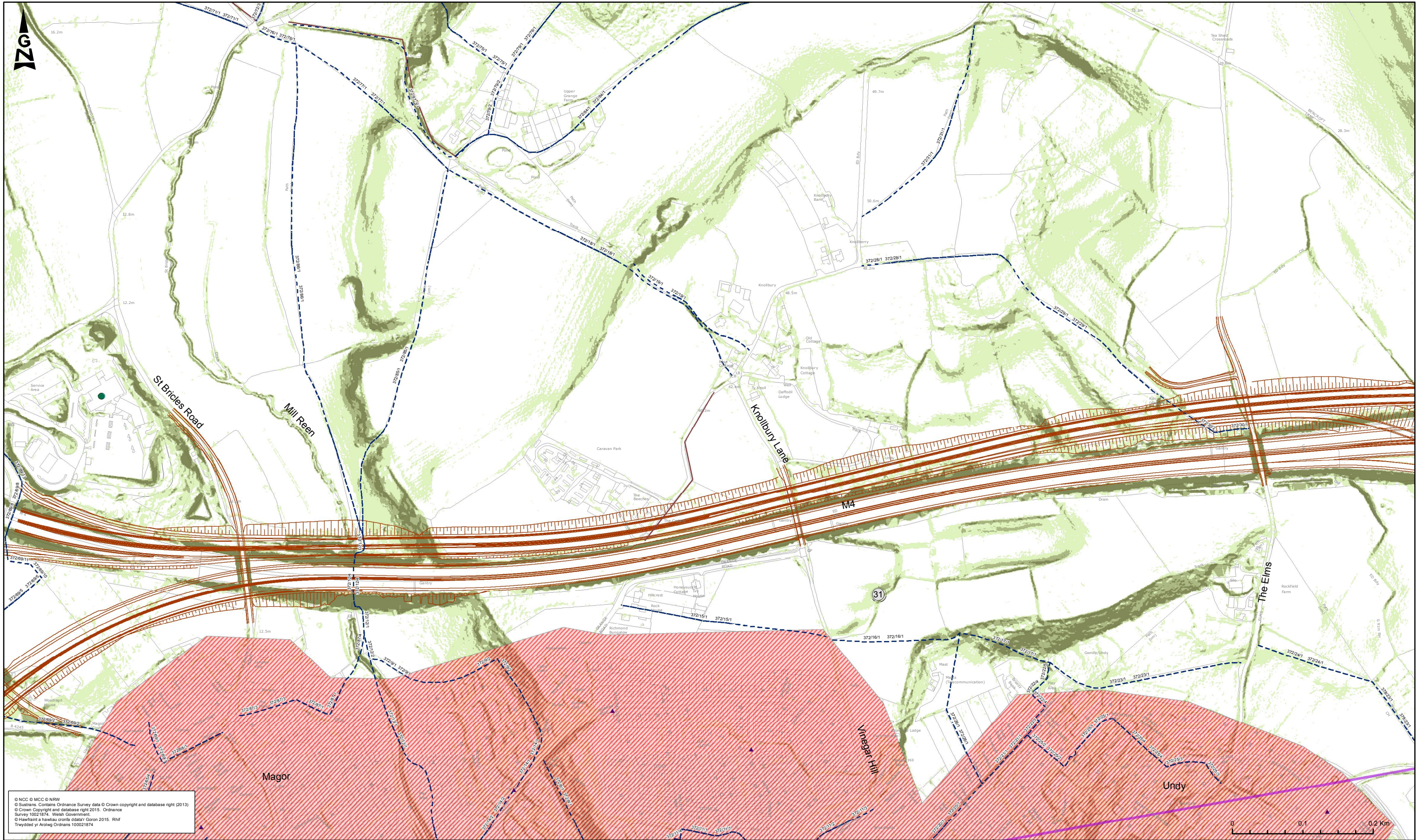
- Other Development Proposals



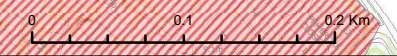
Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chkd	App'd

Drawing Status <b>FOR COSTING</b>		Suitability <b>D1</b>		Project Title <b>M4 CORRIDOR AROUND NEWPORT</b>	
Project Team					
Drawing Title <b>002o Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 15</b>					
Scale <b>1:5,000</b>	Designed / Drawn EB	Checked SW	Approved KN	Authorised BS	
Original Size <b>A3</b>	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016
Drawing Number <b>M4Can - DJV - ENM - ZG_GEN - DR - EN - 0028</b>		Project <b>M4Can - DJV - ENM - ZG_GEN - DR - EN - 0028</b>		Volume <b>Issue</b>	
Location	Type	Role	Number		

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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- ▬▬▬▬▬ Sirhowy Valley Walk
- - - - - Footpaths
- ▬▬▬▬▬ Riding Routes
- ▬▬▬▬▬ Unclassified Roads
- ▬▬▬▬▬ Proposed Route
- ▬▬▬▬▬ Desire Lines
- ▬▬▬▬▬ Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chkd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chkd	App'd

Drawing Status	FOR COSTING
Suitability	D1
Project Title	M4 CORRIDOR AROUND NEWPORT
Project Team	
Client	

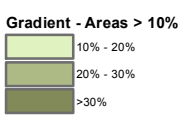


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Original Size	A3	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016
Drawing Number		Project	M4Can - DJV - ENM - ZG_GEN - DR - EN - 0029	Originator		Volume	
Location		Type		Role		Number	
							Issue



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- LEGEND**
- Tourist Attractions
  - Library
  - Sport and Leisure Centres
  - Hospitals
  - Clinic: Health Centre
  - Places of Worship
  - Schools and Colleges
  - Stations
  - Bus Stops
  - Bus Station
  - Sirhowy Valley Walk
  - Footpaths
  - Riding Routes
  - Unclassified Roads
  - Sustrans National Route
  - Proposed Route
  - Desire Lines
  - Trip Generating Clusters
  - Residential Areas
  - Key Development Proposals of Relevance:
  - Other Development Proposals

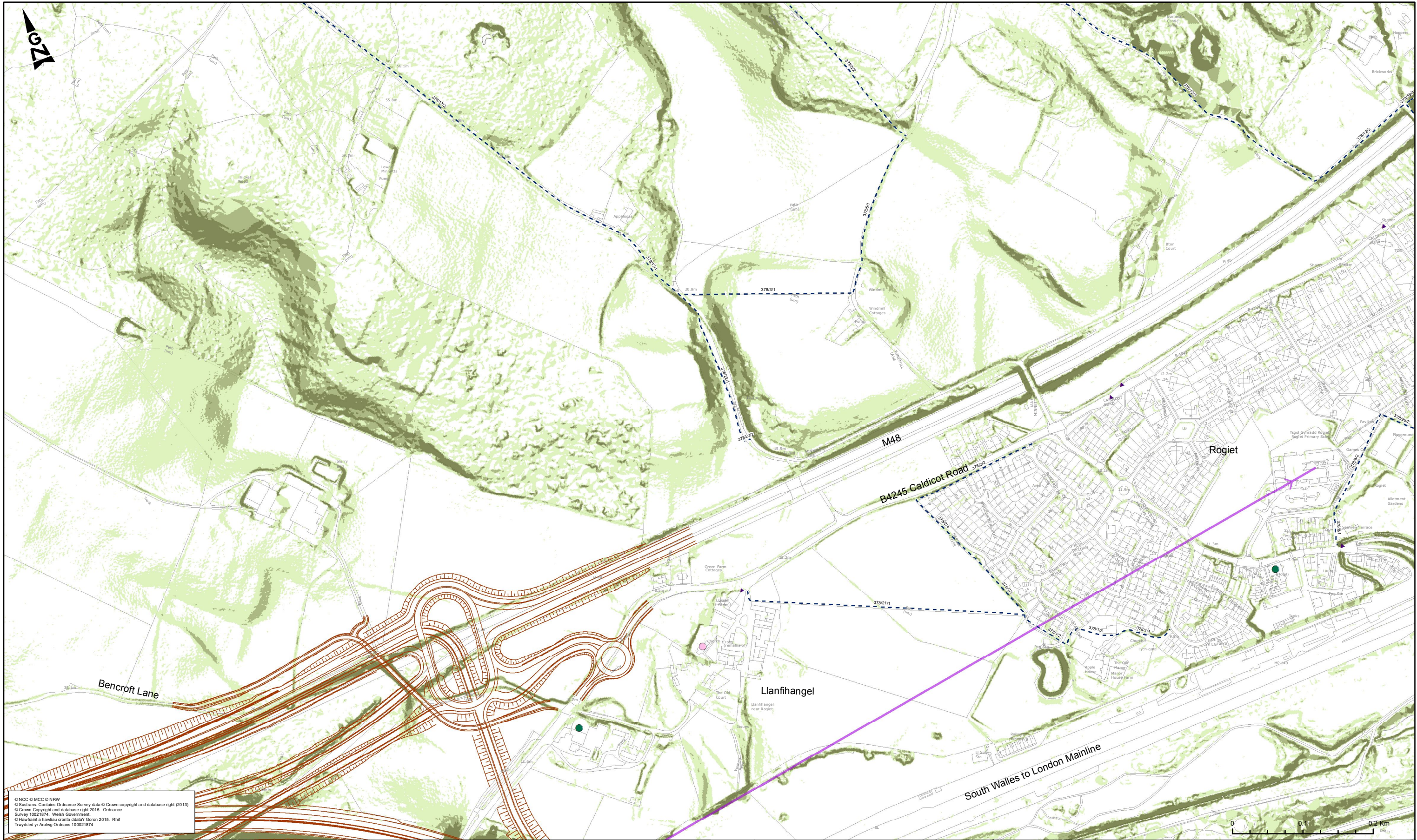


Issue	Date	Description	By	Chkd	App'd
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Rev.	Date	Description	By	Chkd	App'd

Drawing Status	FOR COSTING
Suitability	D1
Project Title	M4 CORRIDOR AROUND NEWPORT
Project Team	
Client	



Drawing Title					
002q Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 17					
Scale	1:5,000	Designed / Drawn	Checked	Approved	Authorised
Original Size	A3	Date	Date	Date	Date
Drawing Number		Project	Originator	Volume	Revision
		M4CaN - DJV - ENM - ZG_GEN - DR - EN - 0030			Issue
Location	Type	Role	Number		



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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Footpaths
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Date	Description	By	Chk'd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev.	Date	Description	By	Chk'd	App'd


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

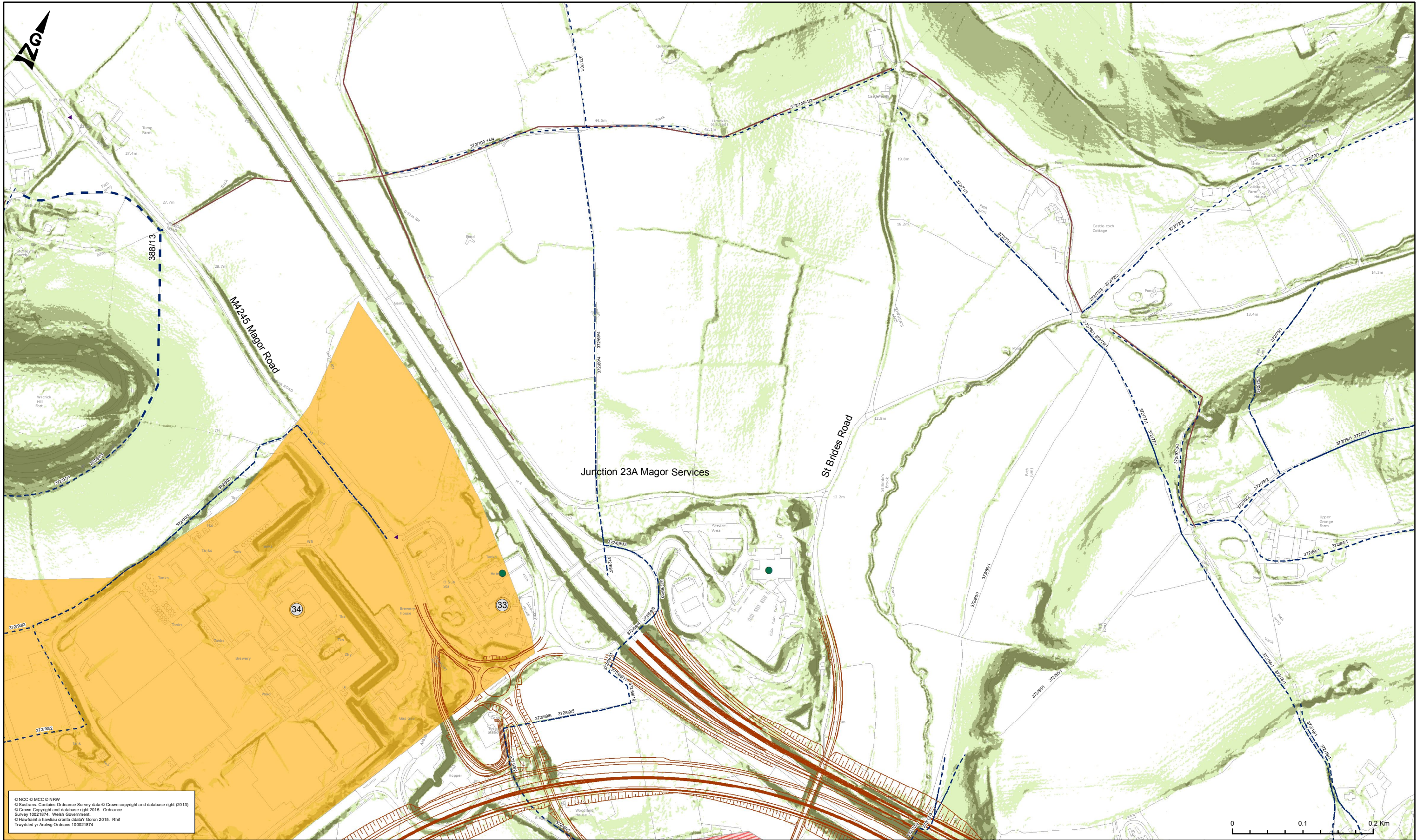
Project Team:

Client:

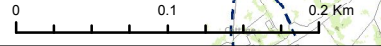


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Scale		Designed / Drawn	Checked	Approved	Authorised
1:5,000		EB	SW	KN	BS
Original Size	Date	Date	Date	Date	Date
A3	17/02/2016	17/02/2016	17/02/2016	17/02/2016	17/02/2016
Drawing Number	Project	Originator	Volume	Revision	Issue
	M4Can - DJV - ENM - ZG_GEN - DR - EN - 0031				
Location	Type	Role	Number		



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**LEGEND**

- Tourist Attractions
- Library
- + Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station

- Sirhowy Valley Walk
- Footpaths
- - - Footpaths
- Unclassified Roads
- Proposed Route
- Desire Lines
- ▨ Trip Generating Clusters
- ▨ Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

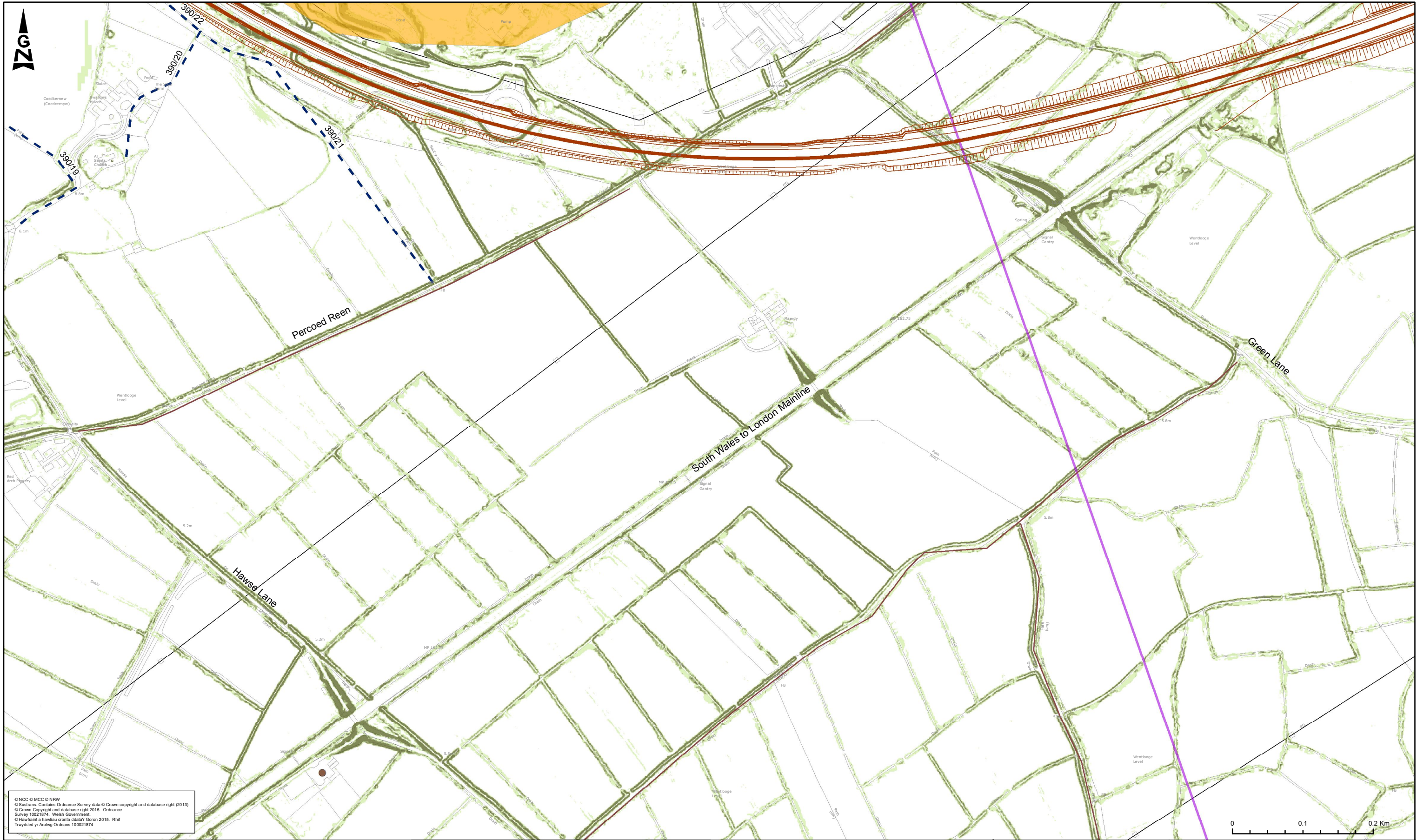
**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%

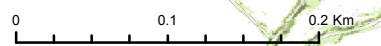


Issue	Date	Description	By	Chk'd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN

Drawing Status	FOR COSTING	Suitability	D1	Project Title	M4 CORRIDOR AROUND NEWPORT									
Project Team					Drawing Title	002s Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 19								
Client					Scale	1:5,000	Designed / Drawn	EB	Checked	SW	Approved	KN	Authorised	BS
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					Drawing Number	Project		Originator		Volume		Revision		
					M4Can - DJV - ENM - ZG_GEN - DR - EN - 0032		Llywodraeth Cymru Welsh Government				Issue			
					Location	Type	Role	Number						



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**LEGEND**

- Equestrian Facilities
- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- + Clinic: Health Centre
- + Places of Worship
- + Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- Footpaths
- Unclassified Roads
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals

**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Rev	Date	Description	By	Chk'd	App'd
MAR 2016			FINAL ISSUE TO WELSH GOVT	EB	SW	KN


Drawing Status: **FOR COSTING**

Suitability: **D1**

Project Title: **M4 CORRIDOR AROUND NEWPORT**

Project Team:

Client:



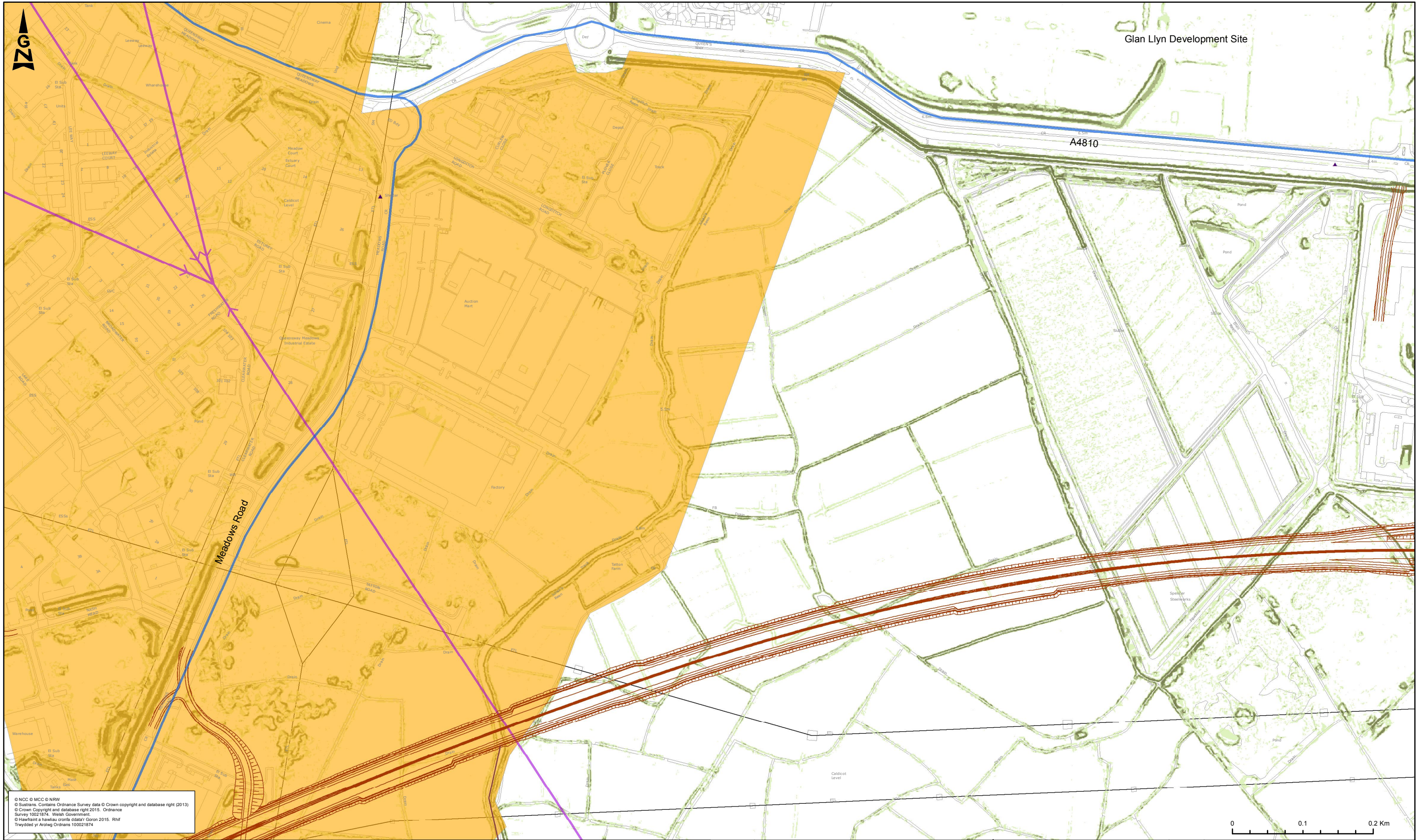
Llywodraeth Cymru  
Welsh Government

Drawing Title		Scale		Designed / Drawn	Checked	Approved	Authorised
002t Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 20		1:5,000	EB	SW	KN	BS	
		Original Size: A3	Date: 17/02/2016	Date: 17/02/2016	Date: 17/02/2016	Date: 17/02/2016	
Project	Originator	Volume	Issue				
M4CaN - DJV - ENM - ZG_GEN - DR - EN - 0033							
Location	Type	Role	Number				

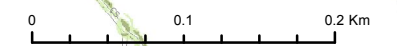


A4810

Meadows Road



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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- Bus Stops
- Bus Station

- Sirhowy Valley Walk
- Unclassified Roads
- Sustrans Local Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas

**Gradient - Areas > 10%**

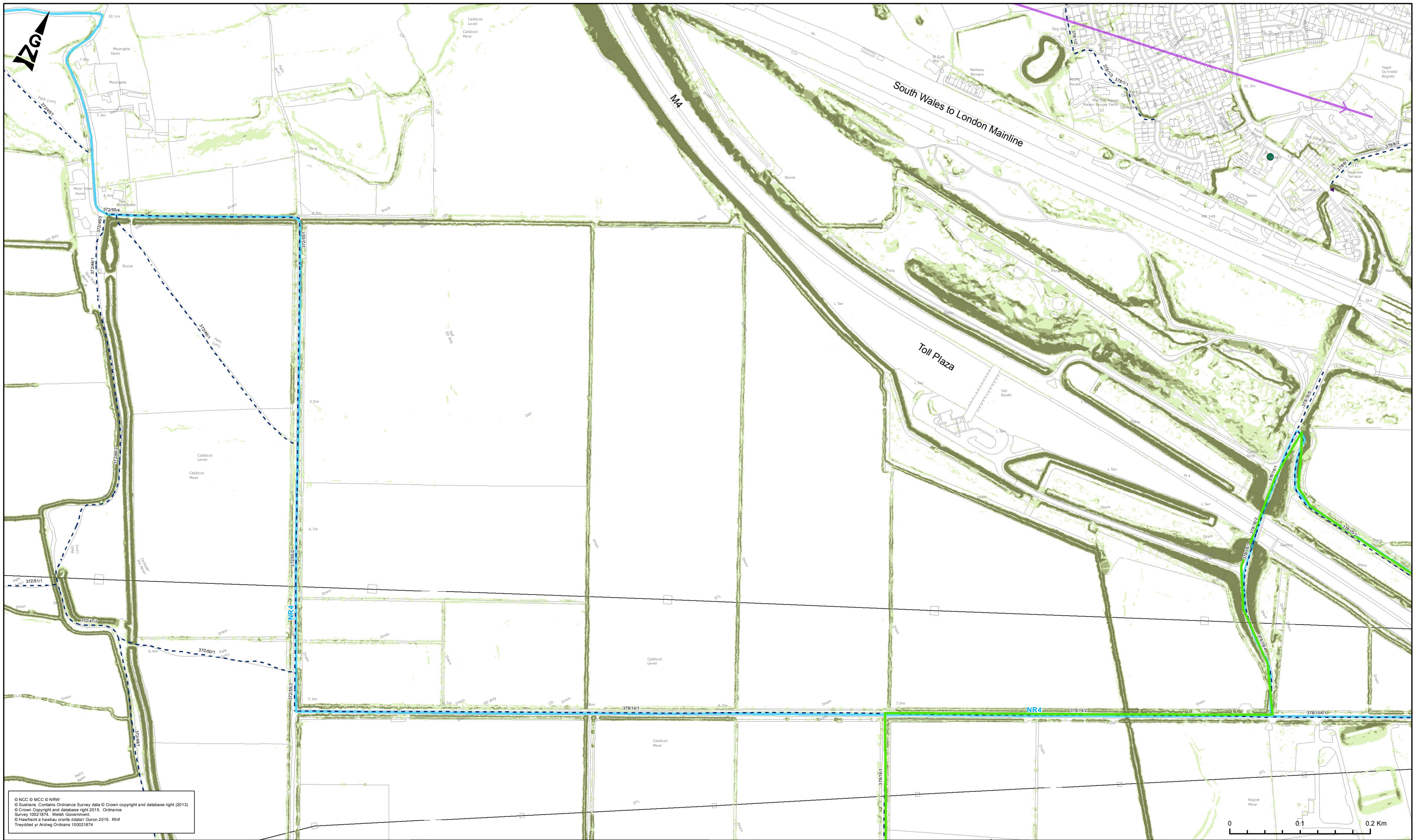
- 10% - 20%
- 20% - 30%
- >30%

○ Key Development Proposals of Relevance:  
 ○ Other Development Proposals

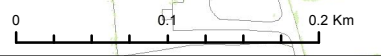


Issue	Date	Description	By	Chk'd	App'd
MAR 2016		FINAL ISSUE TO WELSH GOVT	EB	SW	KN

Drawing Status	FOR COSTING	Suitability	D1	Project Title	M4 CORRIDOR AROUND NEWPORT									
Project Team					Drawing Title	002u Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 21								
Client					Scale	1:5,000	Designed / Drawn	EB	Checked	SW	Approved	KN	Authorised	BS
					Original Size	A3	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016
					Drawing Number	Project		Originator		Volume		Issue		
					M4Can - DJV - ENM - ZG_GEN - DR - EN - 0034		Llywodraeth Cymru Welsh Government							
					Location	Type	Role	Number						



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**LEGEND**

- Tourist Attractions
- Library
- Sport and Leisure Centres
- + Hospitals
- Clinic: Health Centre
- Places of Worship
- Schools and Colleges
- Stations
- ▲ Bus Stops
- ▲ Bus Station
- Sirhowy Valley Walk
- - - Footpaths
- Wales Coastal Path
- Sustrans National Route
- Proposed Route
- Desire Lines
- Trip Generating Clusters
- Residential Areas
- Key Development Proposals of Relevance:
- Other Development Proposals


**Gradient - Areas > 10%**

- 10% - 20%
- 20% - 30%
- >30%



Issue	Rev	Date	Description	By	Chk'd	App'd
MAR 2016	1		FINAL ISSUE TO WELSH GOVT	EB	SW	KN

Drawing Status <b>FOR COSTING</b>		Suitability <b>D1</b>		Project Title <b>M4 CORRIDOR AROUND NEWPORT</b>	
Project Team		Client		Drawing Title <b>002v Trip Generators, Desire Lines and Obstacles (% Gradient) Sheet 22</b>	
Scale <b>1:5,000</b>	Designed / Drawn EB	Checked SW	Approved KN	Authorised BS	
Original Size <b>A3</b>	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016	Date 17/02/2016	
Drawing Number Project <b>M4CaN - DJV - ENM - ZG_GEN - DR - EN - 0035</b>		Volume Originator Volume		Revision Issue	
Location	Type	Role	Number		

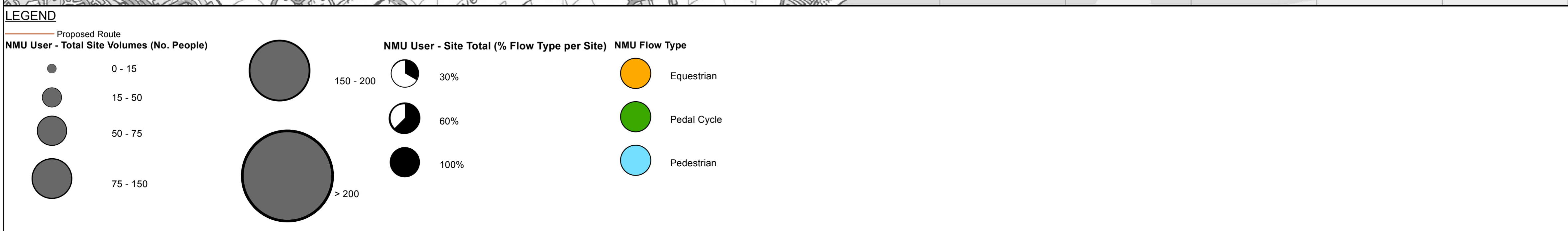
  
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## **Appendix C**

### NMU Themed Context Plan: NMU Flows

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0006 – NMU Context Plan 003 (NMU Weekday Flows)

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0007 – NMU Context Plan 004 (NMU Weekend Flows)



**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction	(Enter "None" if applicable)
Maintenance / Cleaning	(Enter "None" if applicable)
Use	(Enter "None" if applicable)
Decommissioning / Demolition	(Enter "None" if applicable)

Issue	MAR 2016	FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev	Date	Description	By	Chkd	Appd

FOR COSTING

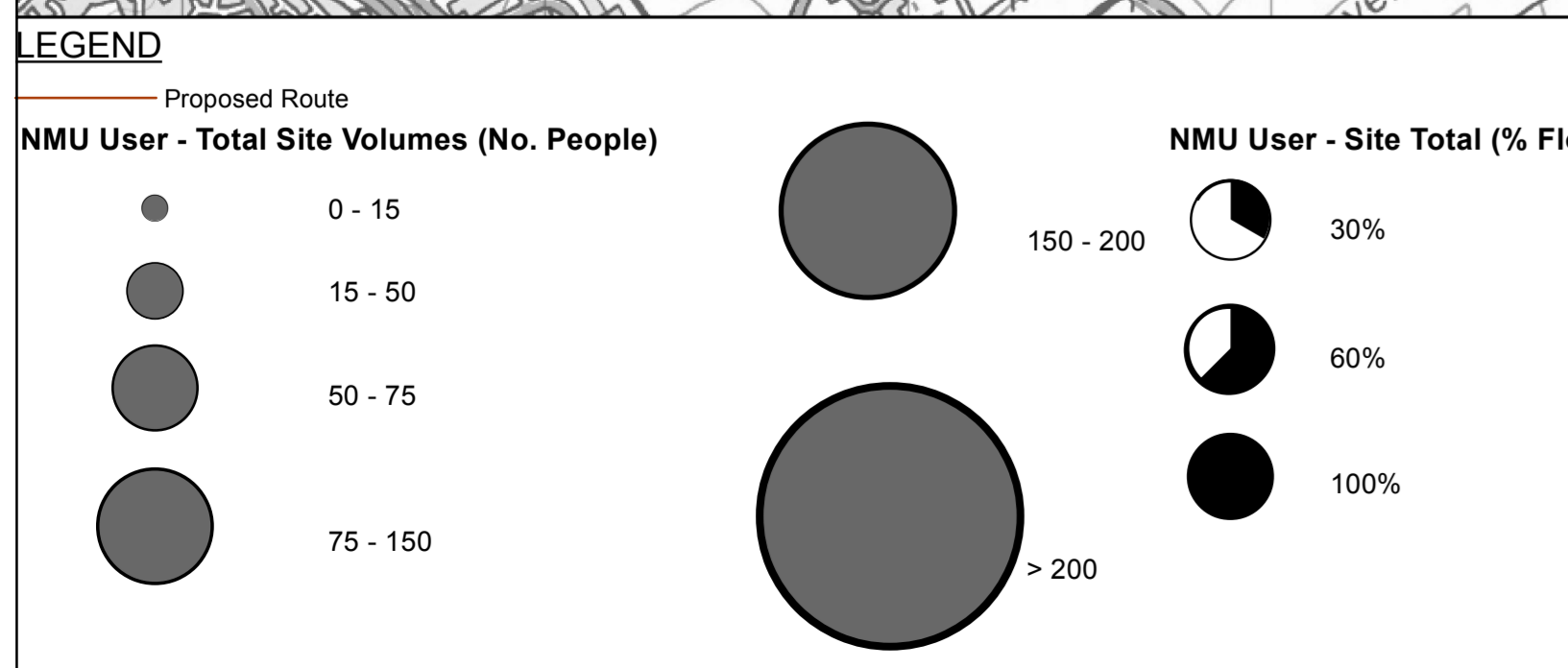
Project Team

Client

**M4 CORRIDOR AROUND NEWPORT**

003 NMU Routine (Weekday) Flows

Scale	1:20,000	Designed / Drawn	EB	Checked	SW	Approved	KN	Authorised	BS
Original Size	Extended A1	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016	Date	17/02/2016
Drawing Number	M4CaN-DJV-ENM	Volume	ZG_GEN-DR-EN-0007	Revision	Issue				



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION			
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)			
Construction (Enter "None" if applicable)			
Maintenance / Cleaning (Enter "None" if applicable)			
Use (Enter "None" if applicable)			
Decommissioning / Demolition (Enter "None" if applicable)			
Issue	MAR 2016	FINAL ISSUE TO WELSH GOVT	
Rev	Date	Description	By: SW KN

FOR COSTING		D1	
Project Team			
Client			

Project Title			
M4 CORRIDOR AROUND NEWPORT			
Drawing Title			
004 NMU Leisure (Weekend) Flows			
Scale	Designed / Drawn	Checked	Approved
1:20,000	EB	SW	KN
Extended A1	Date	Date	Date
17/02/2016	17/02/2016	17/02/2016	17/02/2016
Project	Originator	Volume	Revision
	M4CaN-DJV-ENM		Issue
Location	Type	Role	Number

## **Appendix D**

### **NMU Themed Context Plan: Vehicle Flow Data**

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0008 – NMU Context Plan 005 (AM Peak Vehicle Flows)

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0009 – NMU Context Plan 006 (PM Peak Vehicle Flows)

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0010 – NMU Context Plan 007 (AADT Vehicle Flows)



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**LEGEND**

- Traffic Count**
- 2 - 50
  - 51 - 250
  - 251 - 500
  - 501 - 1000
  - >1000
  - Proposed Route

**Traffic Count Locations**

1	Coal Pit Lane	Castleton
2	Pound Hill	Castleton
3	A48	Castleton/Newport
4	Church Lane	Newport
6	B4239	Newport
8	Corporation Road	Newport
9	Meadows Road	Newport
10a	Rush Wall	Newport
10b	North Row	Newport
10c	Rush Wall	Newport
10d	North Row	Newport
11	Bareland Road	Magor
12	Green Moor Lane	Magor
13	Newport Road	Magor
14	St Brides Road	Magor
15	Grange Road	Magor
16	Unnamed Road	Magor
17	The Elms	Magor
18	B4245	Magor
19	Bencroft Lane	Magor

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction	(Enter "None" if applicable)
Maintenance / Cleaning	(Enter "None" if applicable)
Use	(Enter "None" if applicable)
Decommissioning / Demolition	(Enter "None" if applicable)

Issue	MAR 2016	FINAL ISSUE TO WELSH GOV'T	EB	SW	KN
Rev	Date	Description	By	Chk'd	App'd

Project Title	M4 CORRIDOR AROUND NEWPORT
Project Team	
Client	
Issue	Issue

**FOR COSTING**

Subsidiary: D1

Scale: 1:20,000

Original Size: Extended A1

Design / Draw: EB

Date: 17/02/2016

Checked: SW

Date: 17/02/2016

Approved: KN

Date: 17/02/2016

Authorised: BS

Date: 17/02/2016

Volume: M4CaN-DJV-ENM ZG\_GEN-DR-EN-0009

Location: Issue

**005 Average Weekday AM Traffic Flow (08:00 - 09:00)**

Scale: 0 0.75 1.5 Kilometres

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**LEGEND**

- Traffic Count**
- 2 - 50
  - 51 - 250
  - 251 - 500
  - 501 - 1000
  - >1000
  - Proposed Route

- Traffic Count Locations**
- |     |                  |                   |
|-----|------------------|-------------------|
| 1   | Coal Pit Lane    | Castleton         |
| 2   | Pound Hill       | Castleton         |
| 3   | A48              | Castleton/Newport |
| 4   | Church Lane      | Newport           |
| 6   | B4239            | Newport           |
| 8   | Corporation Road | Newport           |
| 9   | Meadows Road     | Newport           |
| 10a | Rush Wall        | Newport           |
| 10b | North Row        | Newport           |
| 10c | Rush Wall        | Newport           |
| 10d | North Row        | Newport           |
| 11  | Bareland Road    | Magor             |
| 12  | Green Moor Lane  | Magor             |
| 13  | Newport Road     | Magor             |
| 14  | St Brides Road   | Magor             |
| 15  | Grange Road      | Magor             |
| 16  | Unnamed Road     | Magor             |
| 17  | The Elms         | Magor             |
| 18  | B4245            | Magor             |
| 19  | Bencroft Lane    | Magor             |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction  
(Enter "None" if applicable)

Maintenance / Cleaning  
(Enter "None" if applicable)

Use  
(Enter "None" if applicable)

Decommissioning / Demolition  
(Enter "None" if applicable)

Issue	Rev	Date	Description	By	Chkd	Apprd
FINAL ISSUE TO WELSH GOV'T		MAR 2016		EB	SW	KN

**FOR COSTING**

Project Team	
Client	

**M4 CORRIDOR AROUND NEWPORT**

Project Title	M4 CORRIDOR AROUND NEWPORT				
Drawing Title	006 Average Weekday PM Traffic Flow (17:00 - 18:00)				
Scale	1:20,000	Designed / Drawn	Checked	Approved	Authorised
Original Size	17/02/2016	EB	SW	KN	BS
Extended A1	17/02/2016	17/02/2016	17/02/2016	17/02/2016	17/02/2016
Drawing Number	M4CaN-DJV-ENM ZG_GEN-DR-EN-0010				Issue
Location	Type	Role	Volume	Number	



Llywodraeth Cymru  
Welsh Government





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 © Sky High Technology ATCs, 2015

LEGEND	
	Traffic Count
	5
	6 - 50
	51 - 500
	501 - 2000
	>2000
	Proposed Route

Traffic Count Locations		
1	Coal Pit Lane	Castleton
2	Pound Hill	Castleton
3	A48	Castleton/Newport
4	Church Lane	Newport
6	B4239	Newport
8	Corporation Road	Newport
9	Meadows Road	Newport
10a	Rush Wall	Newport
10b	North Row	Newport
10c	Rush Wall	Newport
10d	North Row	Newport
11	Bareland Road	Magor
12	Green Moor Lane	Magor
13	Newport Road	Magor
14	St Brides Road	Magor
15	Grange Road	Magor
16	Unnamed Road	Magor
17	The Elms	Magor
18	B4245	Magor
19	Bencroft Lane	Magor

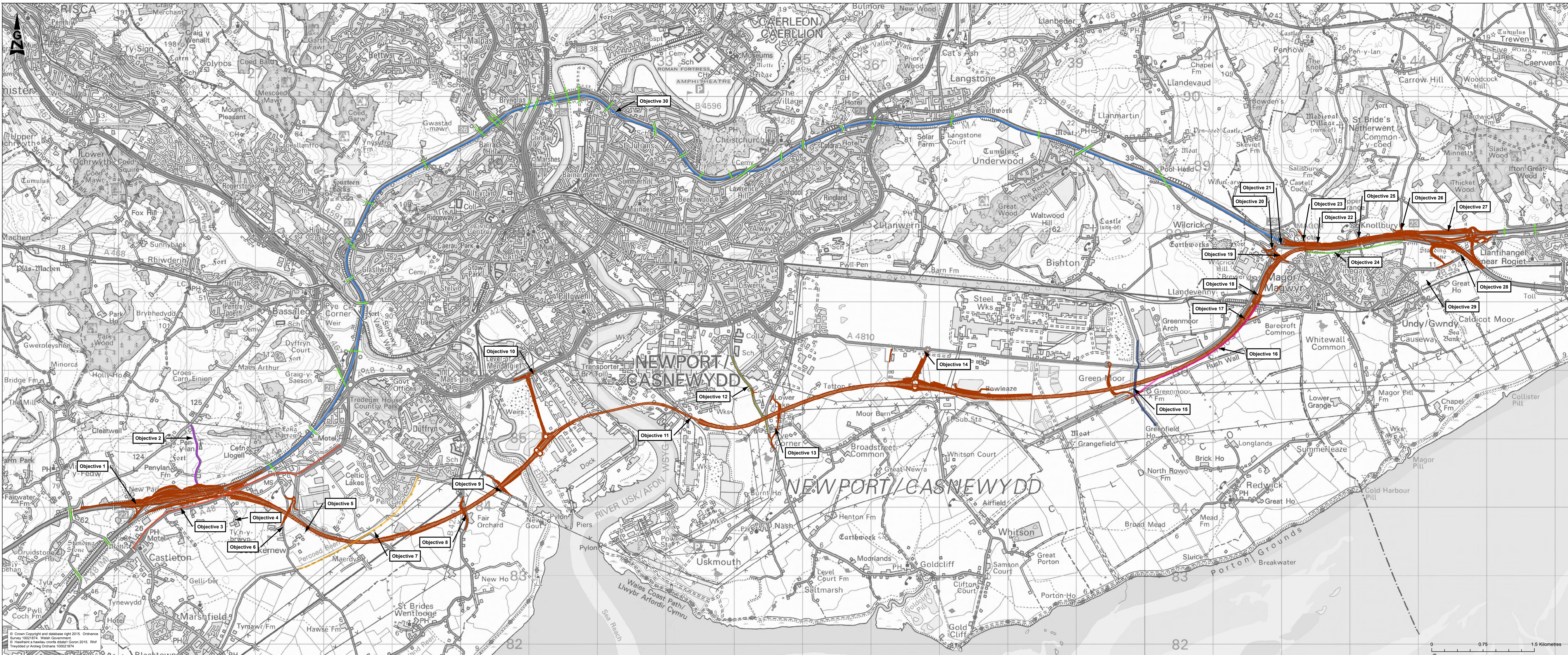
SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION			
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)			
Construction (Enter "None" if applicable)			
Maintenance / Cleaning (Enter "None" if applicable)			
Use (Enter "None" if applicable)			
Decommissioning / Demolition (Enter "None" if applicable)			
Issue	MAR 2016	FINAL ISSUE TO WELSH GOV'T	EB SW KN
Rev	Date	Description	By Chk'd App'd

FOR COSTING		D1		M4 CORRIDOR AROUND NEWPORT	
Project Team					
Client					
<b>007 Average Weekly Daily Traffic Flow (07:00 - 19:00)</b>					
Scale	1:20,000	Designed / Drawn	EB SW	Checked	KN
Original Size	Extended A1	Date	17/02/2016	Date	17/02/2016
Drawing Number	M4CaN-DJV-ENM	Volume	ZG_GEN-DR-EN-0011	Revision	Issue
Location	Type	Role	Number		

## **Appendix E**

### Plan of Scheme Objectives for NMUs

M4CaN-DJV-ENM-ZG\_GEN-DR-EN-0011 – NMU Context Plan 008 (Objective Locations)



**LEGEND**

**Road Extents**

- Objective 2
- Objective 3
- Objective 7
- Objective 12
- Objective 15
- Objective 16
- Objective 24
- Objective 31
- Objective 32

— Proposed Route

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log)

Construction (Enter "None" if applicable)	
Maintenance / Cleaning (Enter "None" if applicable)	
Use (Enter "None" if applicable)	
Decommissioning / Demolition (Enter "None" if applicable)	

Issue	MAR 2016	FINAL ISSUE TO WELSH GOVT	EB	SW	KN
Rev	Date	Description	By	Chk'd	App'd

**FOR COSTING**

Project Team

Client

**M4 CORRIDOR AROUND NEWPORT**

008 Objectives

Scale	1:20,000
Original Size	Extended A1
Designed / Drawn	EB
Checked	SW
Approved	KN
Authorised	BS
Date	17/02/2016
Date	17/02/2016
Date	17/02/2016
Date	17/02/2016
Volume	Issue

M4CaN-DJV-ENM  
ZG\_GEN-DR-EN-0012

## Appendix F

### Bus Operator's Timetables

<http://www.newportbus.co.uk/Journey-Planner-December-2015>

<https://www.stagecoachbus.com/timetables>

<http://www.natgroup.co.uk/service-area/newport-monmouthshire-gwent>

<http://www.nationalexpress.com/assets/uploads/pdf/timetables/R201.pdf>

<http://www.nationalexpress.com/assets/uploads/pdf/timetables/R509.pdf>

<http://www.nationalexpress.com/assets/uploads/pdf/timetables/R508.pdf>

<http://uk.megabus.com/routesuk.aspx>

## Appendix G

### Rail Operator's Timetables

<https://www.gwr.com/your-journey/journey-information/train-times-and-routes>

<http://www.arrivatrainswales.co.uk/Timetables/>

[https://www.crosscountrytrains.co.uk/media/393376/nottingham\\_and\\_derby\\_to\\_bristol\\_and\\_cardiff\\_december\\_2015.pdf](https://www.crosscountrytrains.co.uk/media/393376/nottingham_and_derby_to_bristol_and_cardiff_december_2015.pdf)

[https://www.crosscountrytrains.co.uk/media/393337/manchester\\_to\\_the\\_south\\_west\\_and\\_south\\_coast\\_december\\_2015.pdf](https://www.crosscountrytrains.co.uk/media/393337/manchester_to_the_south_west_and_south_coast_december_2015.pdf)

## **Appendix H**

### Summary of Developments of Relevance

M4 Model - Development Proposals

Ref.	Development	County	LDP ref	Status	Development Classification	Total Size (hectares)	Units	Measure	Employees	X Coordinates	Y Coordinates	2022 Size	2027 size	2037 size
1	Llanwern Village	Newport	H3	Planning permission in place	Mixed Housing >900	44	1,100	Housing Units		336607	188491	720	1100	1100
2	Pirelli	Newport	H4	Planning permission in place	Mixed Housing <900	6.5	250	Housing Units		332699	187879	250	250	250
3	Glebelands	Newport	H5	Planning permission in place	Mixed Housing <900	2.83	153	Housing Units		331639	190219	153	153	153
4	Former Tredegar Park Golf Course	Newport	H12	Planning permission in place	Mixed Housing <900	9.3	150	Housing Units		328200	186693	150	150	150
5	Allt Yr Yn Campus	Newport	H13	Under Construction	Mixed Housing <900	5.7	125	Housing Units		330131	188566	125	125	125
6	Monmouthshire Bank Sidings	Newport	H14	Planning permission in place	Mixed Housing <900	11.3	575	Housing Units		330475	186655	240	390	575
7	Victoria Wharf	Newport	H15	Housing Proposal	Mixed Housing <900	1.16	130	Housing Units		331854	187562	26	130	130
8	Penmaen Wharf	Newport	H16	Planning permission in place	Flats- City	0.83	160	Housing Units		331761	186756	160	160	160
9	Former Sainsbury's	Newport	H32	Subject to S106	Mixed Housing <900	2.1	140	Housing Units		331170	188688	135	140	140
10	City Vizion	Newport	H37	Under Construction	Mixed Housing <900	3.2	464	Housing Units		331586	188138	240	315	315
11	Lysaghts Village (Orb works)	Newport	H38	Under Construction	Mixed Housing <900	11.8	517	Housing Units		332851	186650	240	338	338
12	Former Bettws Comprehensive	Newport	H39	Under Construction	Mixed Housing <900	5.9	229	Housing Units		329646	190094	125	125	125
13	Lysaghts Parc	Newport	H45	Under Construction	Mixed Housing <900	5.8	176	Housing Units		332851	186650	100	100	100
14	Glan Llyn	Newport	H47	Under Construction	Mixed Housing >900	193	4,000	Housing Units		335983	186861	1707	2262	4000
15	Whitehead Works	Newport	H51	Housing Proposal	Mixed Housing <900	18.7	400	Housing Units		330873	186756	180	330	330
16	Old Town Dock Remainder	Newport	H52	Housing Proposal	Mixed Housing <900	13.9	350	Housing Units		332061	187070	210	350	350
17	Former Alcan (Jubilee Park)	Newport	H54	Subject to S106	Mixed Housing >900	40	1,064	Housing Units		326877	187896	530	930	930
18	Jigsaw Site, Hartridge	Newport	H55	Housing Proposal	Mixed Housing <900	7.8	200	Housing Units		335493	187863	160	200	200
19	Opposite Belmont Lodge	Newport	H56	Planning permission in place	Flats- City	6.92	122	Housing Units		335143	189895	122	122	122
20	Panasonic	Newport	H58	Housing Proposal	Mixed Housing <900	7.2	250	Housing Units		328851	184692	250	250	250
21	Duffryn	Newport	EM1i	Employment Allocation	Industrial Estate (above 20,000 sqm GFA)	38.5	154,000	GFA	8191	328241	183837	0	154000	154000
22	East of Queensway Meadows, South of Glan Llyn	Newport	EM1ii	Employment Allocation	Industrial Estate (above 20,000 sqm GFA)	27	108,000	GFA	1348	335983	186861	0	108000	108000
23	Celtic Springs	Newport	EM1iii	Employment Allocation	Office- Business Park	6	16,200	GFA	1621	328076	184973	16200	16200	16200
24	Gwent Europark	Newport	EM1v	Employment Allocation	Warehousing (B8)	16	80,000	GFA	754	340545	186284	80000	80000	80000
25	Llanwern former steelworks, eastern end	Newport	EM1 (vii)	Employment Allocation	Industrial Estate (above 20,000 sqm GFA)	35.5	142,000	GFA	1841	337754	186089	0	142000	142000
26	Phoenix Park (former Pirelli works) Corporation Road	Newport	EM1 (viii)	Employment Allocation	Industrial Estate (Up to 20,000 sqm GFA)	2	8,000	GFA	426	332677	187893	8000	8000	8000
27	Friars Walk, Newport	Newport	0	Planning permission in place	0	36,232	GFA	1100		331224	188092	36232	36232	36232
						7,972	GFA				7972	0	0	
						22,640	GFA				22639.5	0	0	
						2,314	GFA				2314	0	0	
						3,440	GFA				3440	0	0	
28	Crick Road, Portskewett	Monmouthshire	SAH2	Mixed use allocation	Mixed Housing <900	10.95	285	Housing Units		349367	188525	285	285	285
					Office- Business Park	1	2,700	GFA	118			2700	2700	2700
29	Fairfield Mabey, Chepstow	Monmouthshire	SAH3	Mixed use allocation	Mixed Housing <900	16.1	350	Housing Units		353704	193774	350	350	350
					Office- Business Park	3	8,100	GFA	401			8100	8100	8100
30	Rockfield Farm, Undy	Monmouthshire	SAH5	Mixed use allocation	Mixed Housing <900	11	270	Housing Units		344117	187741	270	270	270
					Office- Business Park	2	5,400	GFA	258			5600	5600	5600
31	Vinegar Hill, Undy	Monmouthshire	SAH6	Housing Proposal	Mixed Housing <900	7.81	225	Housing Units		343246	187747	225	225	225
32	Sudbrook Paper Mill	Monmouthshire	SAH7	Housing Proposal	Mixed Housing <900	6.6	190	Housing Units		350093	187535	190	190	190
33	Wales One, Magor	Monmouthshire	SAE1a	Employment Allocation	Office- Business Park	4	21,739	GFA	1289	341832	187841	0	0	21739.31
34	Quay Point, Magor	Monmouthshire	SAE1b	Employment Allocation		19.6	83,104	GFA	1962	341573	187704	0	0	0
					Office- Business Park	3.92	10,584	GFA				0	0	10584
					Industrial Estate (above 20,000 sqm GFA)	5.88	23,520	GFA				0	0	23520
					Warehousing (B8)	9.8	49,000	GFA				0	0	49000
35	Gwent Europark, Magor	Monmouthshire	SAE1c	Employment Allocation	Warehousing (B8)	13.3	66,500	GFA	581	340545	188284	0	0	66500
36	Newhouse Farm, Chepstow	Monmouthshire	SAE1f	Employment Allocation	Industrial Estate (above 20,000 sqm GFA)	4	16,000	GFA	200	353297	191414	0	0	16000
37	Pill Row, Severnbridge Ind Est	Monmouthshire	SAE1h	Employment Allocation	Industrial Estate (Up to 20,000 sqm GFA)	1	4,000	GFA	106	349000	187863	0	0	4000
38	Beaufort Park, Chepstow	Monmouthshire	SAE1i	Employment Allocation	Office- Business Park	0.42	1,134	GFA	50	350313	190119	0	0	1134
39	North East Cardiff (West of Pontprennau)	Cardiff	KP2f	Mixed use	Mixed Housing >900	273.1	4,500	Housing Units		319957	183008	2993	4500	4500
40	East of Pontprennau Link Road	Cardiff	KP2g	Mixed use	Mixed Housing >900	80.7	1,300	Housing Units		322263	182583	1070	1300	1300
41	St Mellons Business Park	Cardiff	EC1.1	Employment Allocation	Office- Business Park	31	124,000	GFA		325271	180750	0	0	124000
42	Land at Areas 9-12, St Mellons	Cardiff	H1.1	Housing	Mixed Housing <900	3.98	150	Housing Units		323457	179980	0	150	150
43	Cardiff Gate International Business Park	Cardiff		Built, Unoccupied	Office- Business Park		13,362	GFA	724	321000	183797	13362	13362	13362

## Appendix I

### Public Walking and Cycling Maps

<http://www.newport.gov.uk/documents/Leisure-and-Tourism/Cycle-Map-Newport.pdf>

<http://www.newport.gov.uk/documents/Maps-and-diagrams/Cyclepath-Link-Newport---Cardiff.pdf>

<http://www.newport.gov.uk/documents/Leisure-and-Tourism/Newport-Coast-Path-Map-English.pdf>

<http://www.newport.gov.uk/documents/Leisure-and-Tourism/Countryside/Newport-Countryside-Walks-Leaflets-English.pdf>

<http://www.newport.gov.uk/documents/Leisure-and-Tourism/Small-Walks-for-Small-Feet-English-language.pdf>

<http://www.newport.gov.uk/documents/Leisure-and-Tourism/Healthy-Start-Walks-English-language.pdf>

<http://www.newport.gov.uk/documents/Leisure-and-Tourism/Healthy-Challenge-Walks-English-language.pdf>

<http://www.torfaen.gov.uk/en/Related-Documents/Countryside/Cycle-Lane-and-Routes/Cycle-Route-Map-South-Torfaen.pdf>

<http://www.torfaen.gov.uk/en/RoadsTravelParking/WalkingCycling/Torfaen-Walks/Torfaen-Walks.aspx>

<http://www.monmouthshire.gov.uk/walks-and-trails>

<http://www.keepingcardiffmoving.co.uk/uploads/documents/194/original/Cardiff2015.pdf?1438684614>