

# A6 to Manchester Airport Relief Road:

## Great Crested Newt Mitigation Phased Development Masterplan

13 December 2013

*Produced for*  
Stockport Metropolitan Borough Council

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# 1 Introduction

## 1.1 Background

Stockport Metropolitan Borough Council, Manchester City Council and Cheshire East Council are working as a consortium to promote the construction of a strategic relief road from the A6 to Manchester International Airport; the A6 to Manchester Airport Relief Road (A6MARR). The scheme is the result of the South-East Manchester Multi-Modal Study (SEMMMS), and involves the introduction of a 14 km dual carriageway between the A6 and the airport. Ten kilometres of the relief road would comprise new sections of dual carriageway. A central 4 km section of the relief road would comprise the previously constructed A555 Manchester International Airport Eastern Link Road (MAELR) south of Bramhall.

Ecological surveys were undertaken by Penny Anderson Associates in 2007 to support a previous planning application for the scheme. Further ecological surveys were also undertaken in 2010 by Mouchel to support a new planning application for the scheme under a revised layout, and these were updated in 2013 when the application was submitted to the three local authorities through which the scheme passes. Great crested newts are present within the scheme and a mitigation plan has been developed to offset impacts on these animals, and comply with legislative requirements under the Conservation of Habitats and Species Regulations 2010 (as amended).

Map 1.1 shows the scheme layout between the A6 and Manchester Airport.

## 1.2 Overview of Scheme Phasing

The A6MARR scheme will not be built in a single phase. Accommodation work<sup>1</sup> is required at two locations to prepare the route of the scheme for construction, and this will be undertaken before works on the new relief road begin. Thus, the A6MARR will be constructed in three phases:

1. **Accommodation work; Styal Golf Course** – This first phase will comprise work at Styal Golf Course on the eastern end of the A6MARR scheme. The work will remodel the golf course as the A6MARR will cut across the top of the it a reduce its area. Several agricultural fields to the south-east of the golf course have been purchased and will be used to develop new playable holes to compensate for where the old ones are lost, and maintain a full 18 hole course so that this business, which is locally important, remains viable.

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<sup>1</sup> Works to undertake alterations to existing structures or sites to prepare for the construction of the main scheme. To accommodate the needs of landowners, businesses and institutions which are affected by the scheme construction.

2. **Accommodation work; Bramhall Oil Terminal** – This second phase will comprise the movement of the position of the Oil and Pipeline Agency's kerosene delivery pipeline (part of the national GPSS network) to a location where it will not be affected by construction of the new road.
3. **Construction of the A6MARR** – This third and final phase will involve the construction of the A6MARR.

Map 1.2a shows the location and extent of each of the three phases. Each phase will be subject to an individual planning application, and separate GCN licence application. This masterplan describes how the mitigation plans throughout all three phases has been developed to create an integrated plan across the whole scheme.

### **1.3 Overview of Habitats**

The landscape through which the A6MARR passes is a mixture of suburban development (parks, gardens etc), agricultural pasture mainly used for grazing horses, ruderal habitats and grasslands. The scheme passes through or adjacent to several golf courses. There are also blocks of woodland and watercourses. Annexe 1.3a details the results of Phase 1 habitat surveys undertaken to support the A6MARR scheme, and Map 1.3a shows Phase 1 habitats within and adjacent to the three phases of the scheme. Map 1.3b shows aerial photography covering the same area.



## 2 Scheme-Wide Great Crested Newt Survey Results

### 2.1 Methodology

#### 2.1.1 Overview

Great crested newt surveys were undertaken in 2013, updating previous work undertaken in 2010. Reports and data for both surveys were submitted as part of ecological work to support the A6MARR environmental statement, and are available as Annexe 2.1a. A desk study looking for records of great crested newts from the survey area was also undertaken, with the following sources contacted:

- Greater Manchester Ecology Unit (GMEU)
- Local Amphibian and Reptile Groups (ARG)
- Data from surveys undertaken previously.
- Records from web based sources were also used, including those held on the National Biodiversity Network (NBN) Gateway ([www.nbn.org.uk](http://www.nbn.org.uk)).

All field survey techniques, timing, effort and design were selected with comprehensive consideration of the guidance provided in DMRB (2001), English Nature (2001), JNCC (2003) and Froglife (2001). Water bodies were identified from desk study data (e.g. ecological record searches and contact with local wildlife groups), 1:25000 Ordnance Survey maps and aerial photography, as well as those incidentally discovered during other field surveys. Flowing water (rivers, streams and drainage ditches with obvious water movement) were not considered suitable habitat for great crested newt.

#### 2.1.2 Habitat Suitability Assessment

To determine the potential of the ponds close to the development to support great crested newt all accessible ponds and ditches within 250m (the distance over which these animals are most active and forms the majority of their habitat away from ponds (Baker J. M. R, 1999)) were firstly assessed for their potential to contain great crested newt. This was achieved by use of the Habitat Suitability Index (HSI) published by Oldham et al. (2000). The HSI scoring system provides a means of evaluating habitat quality, and an indication of the likelihood of a breeding population of great crested newt being present at any given location. The HSI is a numerical index (between 0 and 1), 0 indicates unsuitable habitat, 1 represents optimal habitat and incorporates ten suitability indices (SI), all of which are factors thought to affect great crested newt (Oldham *et al.* 2000).

HSI scores were grouped into 5 categories (following the approach used in the National Amphibian and Reptile Survey – NARRS) to give an indication of the suitability of each pond to support great crested newts. These categories were:

- <0.5 - poor
- 0.5 – 0.59 - below average
- 0.6 – 0.69 - average
- 0.7 – 0.79 - good
- > 0.8 - excellent

A threshold HSI value was set at a value greater than 0.50 to target ponds for survey which were more likely to support great crested newts. However, in order to employ best practice (English Nature, 2001), this survey aimed to include all ponds within the scheme redline boundary, including those that achieved scores lower than 0.50.

The threshold was lowered from 0.60 which was used in the 2010 survey.

### 2.1.3 *Presence/Absence Survey*

Where potentially suitable ponds were found, presence/absence surveys were undertaken in accordance with the methodologies given by JNCC (2003) and English Nature (2001). Each pond was surveyed on at least four separate occasions, when great crested newt were found the period of trapping was extended by an additional two visits in order to provide population estimates. Any newts recorded were identified, where possible, by species, sex and age class.

The surveys were carried out from March to June 2013; optimal months to survey for great crested newt (English Nature 2001, JNCC 2003). Overall, surveys were completed under suitable weather conditions and led by experienced surveyors who hold Natural England Science and Education survey licences for great crested newt. The field surveys were completed using four main search methods:

- searches by torchlight (using a torch with 1 million candle power);
- egg searches;
- bottle trapping; and
- netting.

Refugia searches were also carried out around the ponds where possible or as an alternative survey method when those above proved difficult to carry out effectively. Surveys for great crested newt larvae presence were also undertaken in later checks.

### 2.1.4 *Population Size Class Assessment*

For all ponds where the presence of great crested newt was confirmed, a further two visits were carried to determine population size class. Great crested newt population size classes were estimated using the approach set out in English Nature's Great Crested Newt Mitigation Guidelines (English Nature, 2001). The maximum count of adult great crested newt recorded on a single visit and using a single method were used to assign small (counts <10), medium (counts between 11 and 100), or large (counts >100) population size classes to each of the ponds where this species was

present. For the purposes of this assessment a pond which contains, for example, a medium population, according to the 2010 survey data, and a small population in the current survey will be classed as having a medium population for the purposes of mitigation recommendations.

## 2.2 Results

### 2.2.1 *Habitat Suitability Assessment*

Habitat Suitability Indices were recorded during 2013 for water bodies throughout the survey area.

A total of 247 waterbodies were identified using maps, previous data and other sources, however, when visited, 46 of these ponds no longer existed and the locations were scoped out immediately. A further 40 were scoped out of further assessment as they were behind significant barriers for great crested newt dispersal (roads, urban development, running watercourses etc), and an additional 54 were scoped out for the reasons below:

- Habitat totally unsuitable for great crested newts - 14
- Land owner permission to access land not given and pond not visible at all - 4
- Waterbody comprised running water (stream, flowing ditch etc) - 2
- Waterbody was outside 500m from any works – 5
- No significant works within 500m - 29

This left 107 ponds which were all subject to an HSI study. Some of these ponds were surveyed from publicly accessible land, due to lack of landowner access consent, but where the pond was visible from a footpath or bridleway, and therefore the effectiveness of the assessment for these ponds may have been limited by lack of surveyor visibility.

Of the 107 ponds which were subject to an HSI, 102 scored 0.50 and above or were found within the redline boundary and were therefore subjected to surveys for great crested newt presence. Remaining ponds were excluded from the survey as they were either outside of the scheme zone of influence or landowner access was not provided.

### 2.2.2 *Presence/Absence and Population Size Class Assessment*

The maximum adult great crested newt count from a pond in one night (taken as the highest single count from six visits), can be used to estimate the population size class present (English Nature 2001). This count has been determined within this study from bottle trapping or torching as these were the methods that produced the highest counts.

Assessment of population size determines the population class size present as either small, medium or large, as outlined in English Nature (2001) as follows:

- Small –maximum counts of up to 10 adults;

- Medium –maximum counts between 11 and 100 adults;
- Large –maximum counts of over 100 adults.

The results for the population class sizes are presented below. The basis for the use of these estimates is derived from historical knowledge of the absolute numbers of newts regularly present in areas and the returns of historical surveys of them, given that the level of survey effort specified within the guidelines were applied.

Population Size Class	Number of Ponds
Absent	56
Small	23
Medium	6
Large	0
Access denied for field surveys	6
Dried out before/during survey	11
<b>Total</b>	<b>102</b>

The scheme-wide survey results are presented in Map 2.2a (HSI Study) and 2.2b (GCN Survey).

## 3 Scheme Phase 1: Styal Golf Course Accommodation Works

### 3.1 Description of Phase

The need to remodel the existing Golf Course has arisen as a result of the plans to build the A6MARR. The route passes through the northern part of the existing Styal Golf Course. The accommodation works at Styal Golf Course are necessary as an enabling development to ensure adherence to the timetable for obtaining planning permission and beginning construction on the A6MARR. They will also ensure that the golf course can remain a fully operational 18 hole golf course and therefore a viable business.

The accommodation works at the golf course would entail the following:

- Removal of three existing holes;
- Alterations to 4 holes; and
- Development of three new holes on land immediately adjacent to the south eastern boundary of the existing Golf Course. This land is currently used for agricultural purposes.

The works will make a parcel of land to the north of the golf course and within the construction footprint of the A6MARR scheme available by relocating the golf course holes there to the land to the south east of the golf course. This is shown on Map 3.3.

### 3.2 Overall Timescale

Work will be undertaken gradually to make sure the golf course can remain operational during the accommodation works. They will begin in March/April 2014 (the start date will depend on prevailing weather conditions), and be completed by May 2015.

### 3.3 Impacts, Mitigation and Compensation

The majority of works associated with the accommodation works at Styal Golf Course will involve vegetation management which presents no risk to great crested newts living on the site. However there are three areas of earthworks which could affect great crested newts as they occur in habitat that could be used by these animals. In addition, a pond that supports breeding great crested newts will be remodelled (although not lost altogether), and two new compensatory ponds will be created within the land annexed for new golf holes. A further three great crested newt breeding ponds will be retained within areas of earthworks, and a pond not used for breeding will also be retained.

The area of land lost to the construction of the A6MARR scheme will not be altered within this phase and the habitat there will remain until the commencement of Phase 3.

The table below shows the amount of habitat lost and reinstated within Phase 1.

Habitat	Scale of Temporary Impact	Scale of Permanent Impact	Reinstatement
Habitat supporting a "Small" size class GCN population	2ha	0ha	2ha
Habitat supporting a "Medium" size class GCN population	3ha	0ha	3ha
Great crested newt breeding ponds	1	0	3
Other ponds within the works phase	0	0	0

- Areas where earthworks are planned in great crested newt terrestrial habitat will be subject to capture and exclusion between March/April 2014 and July 2014. (The start date will depend on prevailing weather conditions.) Capture and exclusion will be undertaken for a minimum of between 30 and 60 days depending on the size of the population in vicinity of the works, and will prevent impacts to great crested newts using these habitats for foraging and moving around the area.
- The pond to be remodelled will be ring fenced and trapped between March/April 2014 and July 2014 to avoid impacts to great crested newts that may use this aquatic habitat. (The start date will depend on prevailing weather conditions.)
- Earthworks affecting all three areas of great crested newt habitat will be undertaken between August 2014 and November 2014, following the completion of the capture and exclusion exercise.
- Construction of new ponds within the annexed area will proceed as soon as planning is granted, expected January/February 2014. The following spring will be used for planting and as a grow-in period and therefore these habitats will be available for great crested newts for the 2014 breeding season.

Impacts, mitigation and compensation are detailed in Map 3.3.

### 3.4 Receptor Site

This will be located within suitable habitat within Styal Golf Course adjacent to the works area, and is comprised of rough grassland, scrub and ponds; ideal habitat for newts. Map 3.3 shows the location of the receptor site.

### **3.5 Post Development Monitoring**

This will incorporate ponds within 250m of the Phase 1 works boundary, and not behind a significant barrier to great crested newt dispersal. The monitoring survey will begin in the year following completion of the A6MARR scheme (2017) and comprise a population size class survey that will be undertaken for 4 years post development; 2017-2020.

### **3.6 Habitat Maintenance and Management Plan**

The area within Phase 1 will be managed as a golf course in perpetuity. This will maintain a mixture of grassland, scrub, woodland and open water habitat that is ideal for great crested newts in the same way that has contributed to its current high value as habitat for these animals.

Annexe 3.5 comprises a letter confirming the above statement, and a commitment from the golf course owners to manage the site in such a manner indefinitely.

## 4 Scheme Phase 2: Bramhall Oil Terminal Accommodation Works

### 4.1 Description of Phase

The A6MARR scheme will cross an area of land in front of Bramhall Oil Terminal under which the Oil and Pipeline Agency (OPA) has a kerosene delivery pipeline linked to the Government Pipeline and Storage System (GPSS). GPSS is a national pipeline network that delivers fuel to facilities throughout Great Britain, and is an important piece of strategic infrastructure.

The OPA will replace a section of pipeline that runs under the A6MARR scheme with a new section that will be more accessible for maintenance and other tasks following completion of the relief road. This accommodation work will involve:

- Trenching work to insert the new pipeline section.
- Insertion of infrastructure associated with the new pipeline and tie-in with the existing pipeline.
- Grouting of the old pipeline section which will remain in-situ and bringing the new pipeline section on-line.

Although the remaining pipeline will be underground and thus there will be no permanent land-take associated with these works, construction of the A6MARR at Bramhall Oil Terminal will be undertaken soon after the completion of the accommodation works. Thus mitigation work for great crested newt populations in the area will be undertaken to cover both the pipeline replacement and the construction of the A6MARR. The description of timescale, impacts, mitigation and compensation therefore covers both these schemes. The footprint of works is shown in Map 4.3.

### 4.2 Overall Timescale

Work will be undertaken between March/April 2015 (the start date will depend on prevailing weather conditions), and be completed by September 2015.

### 4.3 Impacts, Mitigation and Compensation

Phase 2 will involve the clearance of habitat within the works boundary to make way for the pipeline replacement, and subsequently construction of the A6MARR. Although there is an outline design for both these schemes the detailed design has not been finalised and this will fall to the appointed works contractors (Rush Construction for the pipeline works and Carillion for the A6MARR) and will be undertaken during 2014. Thus it is not possible at this time to give detailed figures as to temporary and permanent terrestrial habitat loss; however the overall area of great crested newt habitat to receive impacts is known. These are shown below.



Habitat	Scale of Impact	Reinstatement
Habitat supporting a "Medium" size class GCN population	38ha	Unknown, to be determine by detailed design
Compensatory habitat creation	N/A	2ha
Great crested newt breeding ponds	2	4

Terrestrial habitat will be subject to capture and exclusion programme lasting 60 days as the population size class in this area is "Medium",

In addition to loss of terrestrial habitat, two great crested newt breeding ponds fall within the footprint of Phase 2 and will be lost. These will be replaced by four new ponds within an area of compensatory habitat to be created on the south-east of the works area. Additionally, a pond not currently used as a breeding pond will be retained within the footprint of the works.

Impacts, mitigation and compensation are detailed in Map 4.3.

#### 4.4 Receptor Site

Two receptor sites have been designated, and are shown on Map 4.3:

- **West side** - This will be located within suitable habitat within Moorend Golf Course adjacent to the works area, and is comprised of rough grassland, scrub and ponds; ideal habitat for newts. It is adjacent to the compensatory habitat to be created and new ponds within.
- **East side** - This will be located within suitable habitat within Bramhall Golf Course adjacent to the works area, and is comprised of rough grassland, scrub and ponds; ideal habitat for newts. It is adjacent to the compensatory habitat to be created and new ponds within.

#### 4.5 Post Development Monitoring

This will incorporate ponds within 250m of the Phase 2 works boundary, and not behind a significant barrier to great crested newt dispersal. The monitoring survey will begin in the year following completion of the A6MARR scheme (2017) and comprise a population size class survey that will be undertaken for 4 years post development; 2017-2020.

#### 4.6 Habitat Maintenance and Management Plan

The area within Phase 2 will be managed as a combination of compensatory habitat for wildlife and roadside verges by the local authorities in the area; Cheshire East Council, Stockport Metropolitan Council, and Manchester City Council, in perpetuity. This will maintain a mixture of grassland, scrub, woodland and open water habitat that is ideal for great crested newts in the same way that has contributed to its current high value as habitat for these animals.

Annexe 5.5 comprises a letter confirming the above statement, and a commitment from the local councils to manage the site in such a manner indefinitely. It also contains a commitment from the councils to state that receptor sites may be used to safely release great crested newts and that these areas will remain as habitats in perpetuity.

## 5 Scheme Phase 3: A6MARR Construction

### 5.1 Description of Phase

Phase 3 incorporates all work to build the A6MARR itself, a new 2-lane dual carriageway constructed to urban standards, orientated on an east-west route from the A6 near Hazel Grove (south east Stockport), via the 4 kilometres of existing A555 to Manchester Airport and the link road to the M56. The A6MARR comprises two sections. The first section is approximately 5.1km in length, starting from a new realigned section of the A6 at Hazel Grove, and extending west to the existing A555 at Woodford Road, Bramhall. The second new section is approximately 3.2 km in length and is an extension of the existing A555 that currently terminates at Wilmslow Road. The route continues in a westerly direction crossing Styal Road and heading towards Manchester Airport along the line of Ringway Road West. The proposed development also incorporates alterations to the Stanley Green roundabout.

The route utilises the entire length of the existing A555 Manchester Airport Eastern Link Road (MAELR) which is approximately 4.0km in length, and incorporates seven new and four improved highway junctions, including a mixture of at-grade and grade separated, signalised controlled and priority junctions, roundabout, T Junction and cross road arrangements. The route crosses four railway lines, one of which is the West Coast Mainline (WCML). Provision for pedestrians and cyclists has been included along the entire length of the proposed development through a segregated multi-user cycle/pedestrian route adjacent to the new road and existing length of the A555. The development will also be accompanied by a package of complementary and mitigation measures which are closely associated with the successful scheme delivery and which have been identified to improve the local road network and off-set the potential impact of the new road.

The footprint of works is shown in Map 5.3.

### 5.2 Timescale

Work will be undertaken between March/April 2015 (the start date will depend on prevailing weather conditions), and be completed by September 2017.

### 5.3 Impacts, Mitigation and Compensation

Phase 3 will involve the clearance of habitat within the works boundary to make way for the construction of the A6MARR. Although there is an outline design for the scheme, the detailed design has not been finalised and this will fall to the appointed works contractor (Carillion), and will be undertaken during 2014. Thus it is not possible at this time to give detailed figures as to temporary and permanent terrestrial habitat loss; however the overall area of great crested newt habitat to receive impacts is known. These are shown below.

Habitat	Scale of Impact	Reinstatement
Habitat supporting a "Small" size class GCN population	5ha	Unknown, to be determine by detailed design
Habitat supporting a "Medium" size class GCN population	26ha	Unknown, to be determine by detailed design
Compensatory habitat creation	N/A	8.5ha
Great crested newt breeding ponds	4	8
Other ponds within the works phase	5	10

Impacts, mitigation and compensation are detailed in Map 4.3.

Terrestrial habitat will be subject to capture and exclusion programme lasting 30 days for one area adjacent to Woodford Road where a "Small" size class population was identified (see Map 4.3, page 8), and 60 days for two further areas; Styal Golf Course (see Map 4.3, page 3), and the tie-in with the A6 (see Map 4.3, page 11), as the population size class in these areas was classed as "Medium".

In addition to loss of terrestrial habitat, two great crested newt breeding ponds fall within the footprint of Phase 2 and will be lost. These will be replaced by four new ponds within an area of compensatory habitat to be created on the south-east of the works area. Additionally, a pond not currently used as a breeding pond will be lost under the footprint of the works and two new ponds will be created within compensatory habitat in Phase 3 to offset this.

Construction of the A6MARR will result in fragmentation of local habitats and may prevent great crested newts accessing areas on the opposite sides of road to which they live. Wildlife underpasses have been provided throughout the route to permit great crested newts to move underneath the road to habitats on the other side. They will be planted to encourage newts to use the underpasses rather than cross the road. They are shown on Map 4.3.

#### 5.4 Receptor Site

- **60 day trapping area; Styal Golf Course** - This will be located within suitable habitat within Styal Golf Course adjacent to the works area, and is comprised of rough grassland, scrub and ponds; ideal habitat for newts.
- **30 day trapping area; Woodford Road** - This will be located within suitable habitat within Bramhall Golf Course adjacent to the works area, and is comprised of rough grassland, scrub and ponds; ideal habitat for newts. It is adjacent to the compensatory habitat to be created and new ponds within.
- **60 day trapping area; Hazel Grove Golf Course** - This will be located within suitable habitat adjacent to Hazel Grove Golf Course, next to the works area,

and is comprised of rough grassland, scrub and ponds; ideal habitat for newts. It is within compensatory habitat to be created and new ponds.

### **5.5 Post Development Monitoring**

This will incorporate ponds within 250m of the Phase 3 works boundary, and not behind a significant barrier to great crested newt dispersal. The monitoring survey will begin in the year following completion of the A6MARR scheme (2017) and comprise a population size class survey that will be undertaken for 4 years post development; 2017-2020.

### **5.6 Habitat Maintenance and Management Plan**

The area within Phase 3 will be managed as a combination of compensatory habitat for wildlife and roadside verges by the local authorities in the area; Cheshire East Council, Stockport Metropolitan Council, and Manchester City Council, in perpetuity. This will maintain a mixture of grassland, scrub, woodland and open water habitat that is ideal for great crested newts in the same way that has contributed to its current high value as habitat for these animals.

Annexe 5.5 comprises a letter confirming the above statement, and a commitment from the local councils to manage the site in such a manner indefinitely. It also contains a commitment from the councils to state that receptor sites may be used to safely release great crested newts and that these areas will remain as habitats in perpetuity.

*We have used our reasonable endeavours to provide information that is correct and accurate and have discussed above the reasonable conclusions that can be reached on the basis of the information available. We would recommend that in order to obtain more secure results, the additional work outlined above should be commissioned.*

# Maps

## Map 1.1 – Scheme Overview

## **Map 1.2 – Scheme Phasing Plan**



**Map 1.3a – Phase 1 Habitat Map**

**Map 1.3b – Aerial Photography**

**Map 2.2a – Scheme wide GCN survey results – HSI study**

**Map 2.2b – Scheme wide GCN survey results – field survey**

### **Map 3.3 – Phase 1 impacts and mitigation**

## **Map 4.3 – Phase 2 impacts and mitigation**

### **Map 5.3 – Phase 3 impacts and mitigation**

# Annexes

## **Annexe 1.3 – Phase 1 Habitat Survey Report**



## **Annexe 2.1 – A6MARR Great Crested Newt Survey Report**

**Annexe 3.5 – Receptor site and habitat management guarantee letter; Styal  
Golf Course**