Elmsbrook (NW Bicester) Monitoring

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| V | Notes | Sent to |
| 0.1 | 7 Dec 2015 Adapted from v5.1 of site-wide monitoring. Split into Elmsbrook-wide, residential and non-residential data to be provided, and residential and non-residential surveys to be carried out. | n/a |
| V1.0 | 9 Dec 2015 Version to be circulated | Louise Caves, A2D and Nicole Lazarus, Bioregional |
| V1.1 | 15 Dec 2015 Amendments following conference call with Nicole Lazarus and Louise Caves |  |
| V2.0 | 15 Dec 2015 Version to be circulated | Louise Caves, A2D and Nicole Lazarus, Bioregional |
| V2.1 | 31 March 2016  Travel monitoring, Construction stage monitoring and Appendix A added in.  Clarification on site wide responsibilities added in following mtg 4th Feb 2016.  Updated ELMP habitat areas and indicator species  Other minor amendments shown as track changes | Louise Caves, A2D |
| V2.2 | 7th March 2017  Majority of track changes accepted.  Comments from LC left in for discussion. | Louise Caves, A2D and Jenny Barker, CDC |
| V3 | 31st March 2017  Reverting to one big spreadsheet | Jenny Barker, CDC and Louise Caves, A2D |
| V3.1 | 25th April 2017 Incorporating comments from meeting on 18th April with Jenny, Louise, Nicole and Michelle. Removing the post occupancy table and referencing an accompanying Excel spreadsheet instead. | Jenny Barker, CDC and Louise Caves, A2D and Michelle Charlesworth, A2D |

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| **Note:**   * **Numbering of each item will be checked after content has been agreed** |

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# Introduction

A monitoring plan for NW Bicester Exemplar (now known as Elmsbrook) was submitted on 5 December 2013 to accompany the Exemplar planning application and was accepted by Cherwell District Council on 22 May 2015.

The preparation of the S106 for Application 1 at NW Bicester provides the opportunity for the monitoring proposals to be revisited, both in response to their achievability in the Exemplar phase and to test their applicability site wide.

The review of site-wide monitoring has led to a revision of the earlier monitoring plan for NW Bicester Exemplar (now known as Elmsbrook).

This report sets out the post-occupancy monitoring that will be required for Elmsbrook to ensure compliance with PPS1 requirements.

# Monitoring requirements

PPS1 sets out monitoring requirements:

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| **ET 6 Monitoring**  ET6.1 Eco-towns will need to be monitored through regional and local monitoring frameworks. Regional Planning Bodies and Local Planning Authorities will be required to monitor the implementation of their spatial policies as set out in the RSS and in development plan documents at the local level. Regional Planning Bodies and Local Planning Authorities should set out in their Annual Monitoring Reports indicators for monitoring the sustainability of eco-towns in their region/district. Arrangements should be put in place for the long-term monitoring of the standards set out for eco-towns as part of the requirements for community governance.  ET6.2 Where an eco-town is brought forward through a planning application, the monitoring requirements should be undertaken as if the proposal was brought forward through the plan making system, and subject to the monitoring of sustainability and any necessary mitigation.  **ET 22 Community and governance**  ET22.1 A long term approach is necessary to ensure a new town retains its integrity as an eco-town and is able to manage change in a planned way. Planning applications should be accompanied by long term governance structures for the development to ensure that:  (c) sustainability metrics, including those on zero carbon, transport, water and waste are agreed and monitored. |

The Supplementary Planning Document for NW Bicester also sets out monitoring requirements:

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| 6.14 Planning submissions should set out a strategy and programme for monitoring and reviewing the proposals once implemented. This will ensure that the eco-town principles and standards are measured and the performance of the development can be managed effectively to provide feedback and potential improvements to later phases of the scheme. A monitoring plan should be prepared to support the planning applications. |

# Why carry out monitoring at NW Bicester?

1. To satisfy planning requirements.
2. To measure performance against the PPS1 requirements (now incorporated into a Supplementary Planning Document for North West Bicester) and the Eco Bicester One Shared Vision. PPS1 specifically requires that sustainability metrics including those on zero carbon, transport, water and waste are agreed and monitored.
3. To provide feedback to the developer about the effectiveness of measures implemented at NW Bicester, both technical and behavioural, for example, monitoring information can be used to check electricity demand assumptions and inform calculations for future phases.
4. To inform and engage residents and occupants about individual and collective performance to support behaviour change and community development.
5. To enable good management and governance – by collecting enough qualitative and quantitative information to understand what is happening at NW Bicester.
6. To inform planning and delivery of subsequent phases of the development alongside changes in technology and best practice, for example recording temperatures in rooms which may be at risk of overheating can be used to inform design of future phases.
7. To provide evidence to support communication of successes and challenges more widely, for example, to government to inform policy-making, to industry for impact and viability, and to the general public.

# Who is responsible for monitoring at NW Bicester?

A2Dominion has specific responsibility for monitoring at Elmsbrook. Monitoring covers residential and non-residential buildings at Elmsbrook. A2Dominion is responsible for developing and monitoring the residential buildings and the buildings in the local centre. Cherwell District Council are responsible for some specific data at Elmsbrook in relation to waste and employment elements of the scheme.

Those responsible for developing other elements of Elmsbrook, e.g. the Primary School and the Eco Business Centre, will need to provide monitoring data to A2Dominion for collation into an Elmsbrook-wide report.

Annually, A2Dominion will produce or commission a report on the performance of Elmsbrook against PPS1 (and SPD) targets. Not all information will be monitored annually. The frequency of monitoring is set out in Elmsbrook Post Occupancy Monitoring Spreadsheet.

As far as possible, data collection will be automated, collecting information from smart meters which can provide real-time information, the energy services company and water company, as well as surveys administered via the Shimmy (or equivalent). Other information will need to be provided by survey of residents and non-residential occupants or by specialist surveys, e.g. biodiversity.

Information will only be put into the public domain in an aggregated form and not attributable to individual properties.

# What is to be monitored at NW Bicester?

## Scope, timing and presentation of monitoring periods

Construction stage monitoring applies to all construction work on the scheme. It will commence on start of works on site and continue until completion.

Post occupancy monitoring will cover all residential and non-residential uses within the site including all residents, businesses and community operations. It will commence during occupation of the first phase.

**Presentation of monitoring results**

A2Dominion will own the monitoring data for Elmsbrook. As this is potentially valuable and commercially sensitive, A2Dominion will control the format in which it is made available to wider audiences. Where Cherwell have annual monitoring requirements, CDC and A2D will liaise and agree on the wording.

Results can be presented in many ways:

• Site wide data giving results collectively for all residents and non-resi occupants

• Individual household or business data (for analysis but feedback only to individuals or businesses)

• Distribution charts showing the range of results for all individual homes (made anonymous for data protection)

Results will be fed back to occupants in a colourful, user friendly way so they are easily understood. Information can show how the results compare with UK averages and with other eco developments. Advice on how to contribute towards even better results in future will be presented and people can be offered the opportunity to contact A2Dominion if they are interested in finding out more.

The Shimmy may offer a forum for discussing the results. The results can also be presented so as to link in with school projects and the curriculum.

**Monitoring Frequency**

Monitoring periods will coincide with Cherwell District Council’s financial year, i.e. 1 April to 31 March.

A2Dominion will provide a monitoring report to Cherwell District Council on a yearly basis containing ongoing data routinely collected along with qualitative analysis. Biennial surveys will inform a full report every 2 years carried out by A2Dominion and presented to Cherwell District Council and other relevant stakeholders.

## Elmsbrook post occupancy monitoring

Please refer to Excel spreadsheet 170425 Elmsbrook S106 Post Occupancy Monitoring requirements.

## Construction Stage Monitoring

Construction stage monitoring will include the following. It will tie in with and compliment the Construction Environmental Management Plan (CEMP) and the Sustainable Waste Management Plan (SWMP).

Update note March 2016: A spreadsheet template for data collection has been drawn up and agreed with Willmott Dixon who have provided 1 year of data Jan-Dec 2015. Template and results for 2015 are in separate documents.

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| **ET9 Homes** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** | |
| ET9-1 | Post construction Code assessment | 🗸 |  | Contractor reporting |  |  | |
| ET9-2 | Post construction air tightness testing meet specified standard | 🗸 |  | Contractor reporting | Air changes per hour |  | |
| ET9-3 | Post construction co-heating tests deliver satisfactory results |  | 🗸 | Contractor reporting |  |  | |
| **ET10 Employment** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** | |
| ET10-1 | Construction related jobs | 🗸 |  | Contractor reporting | FTE each year | Report against the Economic Strategy. Need to define construction related jobs. | |
| ET10-2 | Construction skills strategy implemented | 🗸 |  | Contractor reporting |  | Report against the Economic Strategy | |
| ET10-3 | Number of apprenticeships and training placements | 🗸 |  | Contractor reporting |  | Report against the Economic Strategy | |
| ET10-4 | Number of local businesses benefitting from construction process | 🗸 |  | Contractor reporting |  |  | |
| ET10-5 | Other local jobs due to construction process eg. Product suppliers, catering services etc |  | 🗸 | Contractor reporting |  |  | |
| **ET11 Transport** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** | |
| ET11-1 | Construction site travel plan in place and delivered | 🗸 |  | Contractor reporting |  |  | |
| ET11-2 | Modal share of construction work force | 🗸 |  | Contractor reporting |  |  | |
| ET11-3 | Average commuting distance for construction workers | 🗸 |  | Contractor reporting | Km | Calculated from post codes | |
| ET11-4 | Average sourcing distance of construction materials |  | 🗸 | Contractor reporting | Km | Weighted for different materials by tonnes | |
| **ET16 Biodiversity** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** | |
| ET16-1 | Construction Environmental Management Plan delivered | 🗸 |  | Contractor reporting |  |  | |
| ET16-2 | Out of bounds areas enforced | 🗸 |  | Contractor reporting |  |  | |
| ET16-3 | Trans location measures successful | 🗸 |  | Contractor reporting |  |  | |
| ET16-4 | Key species and habitats successfully protected | 🗸 |  | Contractor reporting |  |  | |
| **ET17 Water** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** | |
| ET17-1 | Construction related water consumption | 🗸 |  | Contractor reporting | litres / year |  | |
| ET17-7 | Water quality in run off streams | 🗸 |  | Contractor reporting |  | Standards and monitoring requirements to be agreed with the Environment Agency | |
| **ET19 Waste** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** |
| ET19-1 | Assessment of waste management practice | 🗸 |  | Assessed on basis of indices below |  |  |
| ET19-2 | SWMP in place and delivered | 🗸 |  | Contractor reporting |  |  |
| ET19-3 | Total construction waste (including recycling) as a % of total construction materials bought | 🗸 |  | Contractor reporting | % |  |
| ET19-4 | Total construction waste (including recycling) | 🗸 |  | Contractor reporting | Tonnes / month |  |
| ET19-5 | Total construction waste to landfill | 🗸 |  | Contractor reporting | Tonnes / month |  |
| ET19-6 | Total hazardous waste | 🗸 |  | Contractor reporting | Tonnes / month |  |
| ET19-7 | Breakdown of construction waste recycled | 🗸 |  | Contractor reporting | Tonnes / month |  |
| ET19-8 | Construction materials reused | 🗸 |  | Contractor reporting | Tonnes / month |  |
| ET19-9 | Earth / fill movements on or off site | 🗸 |  | Contractor reporting | Tonnes / month |  |
| **ET21 Transition** | | **Essential** | **Desirable** | **Monitoring**  **method** | **Units** | **Notes / comments** |
| ET21-1 | CEEQUAL Award achieved | 🗸 |  | Contractor reporting |  | Target Excellent |
| ET21-2 | BREEAM ratings achieved | 🗸 |  | Contractor reporting |  | Target Excellent |
| ET21-3 | Code for Sustainable Homes assessments achieved | 🗸 |  | Contractor reporting |  | Target Code 5 |
| ET21-4 | Carbon emissions from construction activities | 🗸 |  | Contractor reporting | tCO2 /month | Site energy consumption – electricity, diesel consumption |
| ET21-5 | Considerate Contractors standard met | 🗸 |  | Contractor reporting |  |  |
| ET21-6 | Environmental reporting (ref CEMP) | 🗸 |  | Contractor reporting |  | Noise, dust, water runoff, toxic emissions or waste |
| ET21-7 | Embodied carbon impacts of construction | 🗸 |  | Contractor reporting | tCO2 | Track embodied CO2 and compare with original embodied CO2 targets |
| ET21-8 | % Timber products sustainably sourced | 🗸 |  | Contractor reporting | % | Could be FSC, European PEFC, local or reclaimed |
| ET21-9 | Sustainable materials sourcing policy met | 🗸 |  | Contractor reporting | % |  |

## Appendix A - Methodology for Travel Plan Monitoring

**Monitoring the Modal Shift and Low Carbon Targets**

There are two types of survey to be undertaken – (a) automatic counters and (b) household and employee questionnaires.

* Who will undertake the surveys – the Travel Plan Co-ordinator will be responsible for data collection and analysis, reporting to the Monitoring Manager.
* When

Surveys (a) permanent loop counters and pedestrian/cycle counters will be placed in the highway and street furniture so that data can be collected at any point and provided for any time period over the year. The reporting period will need to be agreed and repeated each year, which will need to link in with first occupation so that the targets can be checked.

Surveys (b) to be collected in the same neutral month, during school term time in ‘monitoring year 5’ (from 4th – 5th anniversary of first occupation) and then biannually until 10 years after final occupation

* Methodology

Surveys (a) automatic vehicle counters, automatic pedestrian and cyclist counters, bus passenger boarding numbers for the bus stops in the development to be collected from the operator if ticketing enables this or via a manual survey if not.

Surveys (b) a travel diary to be completed by residents and an employee travel plan questionnaire at the non-residential units. The household questionnaires will require residents to complete a travel diary for every trip made over a period of a week, detailing the mode they used, the number of people in any car used and whether they were the driver or passenger, the purpose of the trip and the destination (by street / car park name if within the Bicester area or by village/town name if outside the study area). In addition they will be asked to supply household information, namely number of people in the household, age profiles, number of cars owned, whether they ever work from home and if so how many times a week, the type, age and engine size and annual mileage (tick against a mileage band + supply a reading from their milometer). The employee questionnaires will ask where the person travels from on a typical day and their mode of transport (on all legs of the journey).

* Duration

Surveys (a) permanent data collected, with analysis carried out in the agreed month with presentation of a detailed week of data to match the week of the household diaries + monthly and year on year comparisons;

Surveys (b) 1 week’s worth of data collected over a 4 week period

* Where

Surveys (a) – vehicle counters at the northern and southern accesses of the site; pedestrian and cyclist counters on the bus-only route and the off-road footway/cycleway connecting the northern and southern parts of the site and on the cycle route along the Banbury Road; bus boarding data for all bus stops in the site.

Surveys (b) all residents and all employees surveyed, with 50% household response rate acceptable, as long as all residents within those households are captured within the survey.

* What are surveys to measure?

Surveys (a) - calculate total site traffic generations over both accesses, split into arrivals and departures in the a.m. and p.m. peaks and compare against tables 8.7 and 8.8 in the TA. Average 12 hour flows over a 5-day and 7-day week should also be measured to provide a year on year comparison. Calculate average 12 hour, a.m. peak, lunchtime peak and p.m. peak pedestrian and cyclist flows along the bus-only link, off-road route and Banbury Road cycle link. Provide information on the number of bus passengers boarding at bus stops in the exemplar site and fare stage information as gathered by the operator. Both these sets of data would serve as baseline information against which to monitor annual changes.

Surveys (b) – to measure the number of trips originating from the site that are by non-car modes, the number of people working from home on a typical work day, the average vehicle emissions for cars owned by residents of the exemplar site, and the average annual vehicle kilometres travelled by private cars owned by residents and establish whether the targets have been met. Car modes defined as car drivers, car passengers and light goods vehicles. Non-car defined as pedestrians, cyclists, bus passengers, rail passengers, motor cycles, taxi, school coach, community transport. Where more than one mode is used information needs to be provided on all legs of the journey, e.g. car to the train station and then train to work. When it comes to analysing the mode by purpose and more than one mode has been used, the stated mode should be the one used on the longest leg of the journey. Purpose choices should be work, on employer’s business, educational attendance, escorting (e.g. to school, doctor’s, etc), shopping, recreation/leisure, visiting friends and relatives, personal business.

* Relevant peak hour movements – in the modelling and TA work the peaks have been assessed as a.m. peak = 8-9 o’clock and p.m. peak = 5-6 o’clock. However, the traffic data and diary surveys should be used to monitor whether this is the actual peak and the analysis methodology amended if necessary.
* Survey data (a) should be passed to Oxfordshire County Council 4 weeks after collection. The final form for surveys (b) will need to be agreed with Oxfordshire County Council staff prior to the monitoring period and after the survey the analysed results should be passed over within 12 weeks. County Council staff will have the right to ask to look at the raw data if there are any discrepancies. The agreed results will be past to local councillors, the GB and made available to the wider public on web sites.

**MONITORING AND INCENTIVES**

**PART 1**

1. **Definitions**

In this schedule the following words and phrases shall have the following meanings unless the context otherwise requires (and for the avoidance of doubt any definition which does not appear below shall be given the meaning allocated to it in the main body of this Deed):

|  |  |
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| **“Car”** | means any mechanically propelled vehicle but excluding electric or hybrid vehicles (being vehicles which use one or more electric motors for propulsion or vehicles that use an on-board rechargeable energy storage system and a fuel based power source for vehicle propulsion respectively)motor- cycles taxis, school coaches and any community transport vehicle (e.g. a dial a ride vehicle) and accordingly “Car Mode” means travel by Car |
| **“Car Trip”** | means a trip by a person travelling (for the whole or part of the journey) in a Car (being either the driver or a passenger) but excluding a Car Trip undertaken using a Car Club Car –(*this will be defined by reference in another Schedule)* |
| **“Follow Up Week”** | means each week selected as the follow-up week for the purposes of paragraph 2.3.4 which shall be a week during school term time in September or October (excluding half term). |
| **“Measurements”** | means the transport mode measurements and the low carbon measurements as set out in Part  2 of this schedule and M2, M3, M4, M5 and M6 shall be construed accordingly |
| **[“Monitoring Manager”] -** | *Refer to Monitoring Schedule* |
| **“Monitoring Year”** | means a calendar year commencing on the Start Date and each subsequent year commencing on the anniversary of that date so that Monitoring Year 1 is the calendar year commencing on the Start Date and ending on the day before the first anniversary of the Start Date and Monitoring Year 2 means the calendar year commencing on the first anniversary of the Start Date and ending on the day before the second anniversary of the Start Date and so on. |
| **“Monitoring Years (Selected)”** | means Monitoring Year 5, Monitoring Year 7, Monitoring Year 9, Monitoring Year 11, Monitoring Year 13, Monitoring Year 15 and in the event that by the end of Monitoring Year 15 10 years has not elapsed from the date of Occupation of the final Dwelling at the Site every second Monitoring Year subsequent to Monitoring Year 15 until 10 years have elapsed from the date of occupation of the final Dwelling at the Site. |
| **“Non-Car Mode”** | means travel by any mode other than by Car. |
| **“Resident”** | means a person whose primary place of residence is at a Dwelling at the Site. |
| **“School Survey”** | means a School Survey as detailed in part 4 of this schedule. |
| **“Site Survey”** | means a Site Survey as detailed in part 4 of this schedule and which comprises a residential survey and a non residential survey |
| **“Specified Week”** | means each week selected for a Site Survey which shall be a week during school term time in September or October excluding half term) |
| **“Start Date”** | means the date of occupation of the 50th Dwelling at the Site. |
| **“Targets”** | means the targets for each Measurement as set out in part 3 of this schedule. |
| **“Travel Plan Co-ordinator”**  ***defined by reference to another Schedule*** |  |
| **“Travel Plan Group”**  ***defined by reference to another Schedule*** |  |
| **“Trip”** | means a journey which satisfies the following criteria:   * the journey is by a person who is either a Resident or who works at the Site but excluding a journey by a child accompanied by an adult when the final destination of both the adult and the child is the same; and * the journey commences at premises at the Site; and * the destination of the journey may be either at the Site or beyond the Site but excluding any journey whose destination is less than 400 metres from its start. |

1. **Surveys**  
   The Owner and the Developer covenant with the County Council that they will ensure that:
   1. during Monitoring Year 4 the Travel Plan Co-ordinator[[1]](#footnote-1) submits to the County Council for its approval
      * + a form of questionnaire for the residential survey and form of questionnaire for the non-residential survey to be undertaken for the purposes of the Site Survey during Monitoring Year 5;
        + the proposed week during Monitoring Year 5 when the Site Survey will be undertaken and the related Follow Up Week; and
        + the methodology for analysing the information supplied by the Site Survey and the proposed format in which such analysis will be presented.

And the Travel Plan Co-ordinator will adjust the forms of questionnaire, the timing of the Specified Week and Follow Up Week in Monitoring Year 5 and the methodology and format of the analysis in accordance with the County Council’s requirements.

* 1. the Travel Plan Co-ordinator reviews with the County Council in each Monitoring Year prior to each of the other Monitoring Years (Selected) the forms of questionnaire for the Site Survey, the proposed Specified Week and Follow Up Week in the following Monitoring Year and the methodology and format of the analysis of the Site Survey and adjusts them in accordance with the County Council’s requirements.
  2. a Site Survey and a School Survey are undertaken during each Monitoring Year (Selected) in accordance with the following provisions
     1. Each Site Survey will be undertaken by the Travel Plan Co-ordinator or by a reputable firm or company which is independent of the County Council, the Owner, the First Developer and the Second Developer
     2. The Travel Plan Co-ordinator will distribute a questionnaire as approved by the County Council pursuant to paragraph 2.1 or as applicable paragraph 2.2 to each Dwelling at the Site in readiness for it to be completed in respect of the Specified Week as approved by the County Council.
     3. The Travel Plan Co-ordinator will distribute a questionnaire as approved by the County Council pursuant to paragraph 2.1 or as applicable paragraph 2.2 to each non-residential premises at the Site (excluding the school) in readiness for completion in respect of the Specified Week as approved by the County Council.
     4. the Travel Plan Co-ordinator will use all reasonable endeavours to secure that a questionnaire is fully completed by the household at each Dwelling and for this purpose will arrange a prize draw or other reasonable incentive and will collect all such questionnaires within1 week of the Specified Week and in the event that there is not secured from 50% or more of the Dwellings at the Site completed questionnaires with full information relating to all the Residents at the relevant Dwelling the Travel Plan Co-ordinator will contact and encourage Residents at those Dwellings who have not completed questionnaires to complete such questionnaires with reference to the Follow Up Week (as approved by the County Council) and will collect those questionnaires.
     5. the Travel Plan Co-ordinator will use all reasonable endeavours to ensure that there is completed by a senior member of staff at each non-residential premise at the Site (excluding the school) a questionnaire in a form approved by the County Council for the non-residential survey for a week day (that is Monday to Friday inclusive excluding bank holidays or any other public holiday) during the Specified Week and that it is returned to him and for this purpose will arrange a prize draw or other reasonable incentive.
     6. the Travel Plan Co-ordinator will use all reasonable endeavours to ensure that there is undertaken by staff employed at the school at the Site a survey in accordance with Part 4 of this Schedule on a typical school day during September or October (as agreed with the school and the County Council) during each of the Monitoring Years (Selected) and the results of such survey provided to the Travel Plan Co-ordinator within 1 week of the survey
     7. the Travel Plan Co-ordinator will supply to the County Council within 12 weeks of the Specified Week or if later within 4 weeks of the day on which the School Survey is undertaken in each Monitoring Year (Selected) a report on the information provided by the Site Survey and the School Survey and an analysis of such information all in accordance with the methodology and format approved by the County Council further to paragraph 2.1 or as applicable paragraph 2.2. The report shall also address such other matters as agreed between the County Council and the Travel Plan Co-ordinator
     8. the Travel Plan Co-ordinator will co-operate with the County Council in such manner and on such occasions as the County Council reasonably require in the verification of the accuracy of any data used in compiling the report and without prejudice to the generality of the foregoing the Travel Plan Co-ordinator will ensure that the originals of the completed residential survey questionnaires the non-residential survey questionnaires as completed and of the School Survey are retained by the Travel Plan Co-ordinator for no less than 12 months and that representatives of the County Council will be permitted to study such original questionnaires as completed at all reasonable times following request and that copies of them will be provided promptly to the County Council if so required.

1. **Measurements**The Measurements set out in column 2 below shall be ascertained from information comprised in the Site Survey and as applicable School Survey undertaken during the Monitoring Year (Selected) as listed in column 1 below and for this purpose the notes set out in Schedule 2 apply.

|  |  |
| --- | --- |
| **Monitoring Year (Selected)** | **Measurements** |
| Year 5 | M2, M3 and M4 |
| Year 7 | M2 and M3 |
| Year 9 | M2, M3, M4, M5 and M6 |
| Year 11 | M3, M3, M4, M5 and M6 |
| Year 13 | M3, M3, M4, M5 and M6 |
| Year 15 | M3, M3, M4, M5 and M6 |
| All other Monitoring Years (Selected) | M3, M3, M4, M5 and M6 |

1. **Payments**  
   In the event that any of the Measurements for a Monitoring Year (Selected) as set out in column 1 below fails to attain the Target for that Monitoring Year (Selected) the Developer and the Owner covenant to pay to the County Council within 14 days of the submission of the report further to paragraph 2.3.7 (or if earlier within 14 days of the due date for submission of that report) the sum set out in column 2 below subject to reduction as set out in paragraphs 5 and 6.

|  |  |
| --- | --- |
| **Monitoring Year (Selected)** | **Payment** |
| Year 5 | £10,000 Index Linked |
| Year 7 | £20,000 Index Linked |
| Year 9 | £30,000 Index Linked |
| Year 11 | £40,000 Index Linked |
| Year 13 | £50,000 Index Linked |
| Year 15 | £100,000 Index Linked |
| All other Monitoring Years (Selected) | £100,000 Index Linked |

1. In the event that for a Monitoring Year (Selected) both of the travel mode targets are attained but one of the low carbon targets is not attained (and the other two low carbon targets are attained) payment pursuant to paragraph 4 shall be reduced by 50%.
2. In the event that the low carbon targets for a Monitoring Year (Selected) are attained but one of the travel mode Measurements fails to attain its target (and the other travel mode Measurement does attain its target) payment pursuant to paragraph 4 shall be reduced as follows:
   1. If the travel mode Measurement that fails to attain its target is within 2% of its target the payment shall be reduced by 90%.
   2. If the travel mode Measurement that fails to attain its target is within 4% of its Target the payment shall be reduced by 70%.
   3. If the travel mode Measurement that fails to attain its target is within 6% of its Target the payment shall be reduced by 50%.
   4. If the travel mode Measurement that fails to attain its target is within 8% of its Target the payment shall be reduced by 30%.
   5. If the travel mode Measurement that fails to attain its target is within 10% of its Target the payment shall be reduced by 10%.
3. The County Council covenants with the Owner, the First Developer and the Second Developer that it shall not use any payment made further to paragraph 4 for any purpose other than one or more of the following at such times and in such form as the County Council in its discretion may decide (but subject always to prior consultation with the Travel Plan Co-ordinator):
   1. Where payment is made because of failure to attain a Target for a travel mode Measurement: measures to encourage the use of Non-Car Modes of travel to or from premises at the Site which may include one or more of the following: enhancements to the bus service bus stop improvements at any stop on the Bus Route, [*to be* defined] promotional activities to encourage new users of Non-Car Modes of travel, promotion of walking and cycling including provision of vouchers, cycle loans to businesses operating in the Site and other incentives and improvements to off-site routes used by the Residents.
   2. Where payment is made because of failure to attain a Target for a low carbon Measurement; infrastructure and support mechanisms which may provide for one or more of the following; measurements to enable Residents to work from home effectively, publicity events and individual discussions to promote opportunities, publicity for and events to advertise the benefit of low vehicle emissions additional electric charging points, offers for Residents who buy a car with reduced carbon emissions and/or personal travel planning and other actions to incentivise Residents to reduce their use of Cars.

8. **General**

8.1 Without prejudice to the above provisions if any report indicates that any of the objectives of the Travel Plan have not been achieved then the Owner the First Developer the Second Developer and the County Council shall seek to agree amendments to the Travel Plan in order to remedy this.

8.2 The Owner, the First Developer and the Second Developer covenant to pay to the County Council *[travel plan monitoring costs]*

**MEASUREMENTS**

**PART 2**

|  |  |  |
| --- | --- | --- |
| **The Travel Mode Measurements** | | |
|  | **Measurements - Core Provisions** | **Supplemental Notes for Establishing Measurements further to Site Survey/School Survey** |
| M2 | The percentage of Trips undertaken by Non-Car Mode. | The total number of Trips and the number undertaken by Non-Car Mode are to be the total number of Trips as recorded by the relevant Site Survey. |
| M3 | The percentage of all the pupils attending the school at the Site on a typical school day who arrive at the school by Car on that day. | The typical school day signifies the school day selected for the relevant School Survey. |
| **The Low Carbon Measurements** | | |
| M4 | The percentage of all adult Residents who are in employment that work from home. | A esident who works for part of a day from home and part of that day elsewhere shall not be treated as working from home on that day and a Resident who works part time (or full time) who works for less than less than 3 hours on a day shall not be treated as working from home on that day. |
| M5 | The average vehicle emissions (Carbon dioxide emitted per kilometre – C02/Km) according to the manufacturer’s specification for all Cars owned by Residents | A Car is treated as owned by a Resident where:   1. the Resident is designated as the owner in the vehicle registration document of the vehicle (and the vehicle is registered at the Driver and Vehicle Licensing Agency in his name); or 2. the Resident has the permanent use of the Car and the Resident’s employer who is designated as the owner in the vehicle registration document of the vehicle (and the vehicle is registered at the Driver and Vehicle Licensing Agency in the name of the employer); or 3. the Resident has an arrangement with a vehicle leasing business for the lease of the Car for a minimum period of 12 months and the vehicle leasing business is designated the owner in the vehicle registration document of the vehicle (and the vehicle is registered at the Driver and Vehicle Licensing Agency in the name of the vehicle leasing business); or 4. the Resident has the permanent use of the Car and his employer has an arrangement with a vehicle leasing business for the lease of the Car and the vehicle leasing company is designated the owner in the vehicle registration document of the vehicle (and the vehicle is registered at the Driver and Vehicle Licensing Agency in the name of the vehicle leasing business). |
| M6 | The average annual mileage (in kilometres) travelled by each Car owned by a Resident during the whole or any part of the year ending at the end of the Specified Week | Annual mileage per Car (owned by a Resident) is to be established from information in the questionnaire for each Dwelling.  The average annual mileage is then established by means of averaging the annual mileage per Car. |

**TARGETS**

**PART 3**

The target for each Measurement as set out in column 2 – 6 below applies for the corresponding Monitoring Year (Selected) as listed in column 1 below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Monitoring Year (selected)** | **M2**  **Travel Mode Target** | **M3**  **Travel**  **Mode**  **Target** | **M4**  **Low Carbon Target** | **M5**  **Low Carbon Target** | **M6**  **Low Carbon Target** |
| Year 5 | 45% or more | 20% or less | 16% or more | - | - |
| Year 7 | 46% or more | 20% or less | - | - | - |
| Year 9 | 47% or more | 20% or less | 16% or more | Less than 110G | 13,250km or less |
| Year 11 | 48% or more | 20% or less | 16% or more | Less than 110G | 13,250km or less |
| Year 13 | 49% or more | 20% or less | 16% or more | Less than 110G | 13,250km or less |
| Year 15 | 50% or more | 20% or less | 16% or more | Less than 110G | 13,250km or less |
| All other monitoring  Years | 50% or more | 20% or less | 16% or more | Less than 110G | 13,250km or less |

**SCHOOL SURVEY**

**PART 4**

**School Survey** – This will comprise –

1. A staff travel survey in the form of a questionnaire; and

2. A pupil survey undertaken by means of the “hands up” methodology with each class teacher asking his pupils at registration to put up their hands according to mode or mode(s) of travel used on their journey to school that day. The teacher will check this against information supplied in the previous survey and if there is any change in the travel mode will confirm by conversation with the relevant pupils.

The information to be recorded shall include:

* the number of pupils attending the school on the survey date;
* the mode/modes of transport used by each pupil attending the school on the survey date on his journey to school;
* the number of those pupils attending the school on the survey date whose journey to school in whole or in part was by Car
* the mode of transport used by each member of staff working at the school at the survey date

**Site Survey – Non Residential Survey**

This will comprise a questionnaire to be completed by a senior member of staff at each non-residential premise (excluding the School).

The information to be recorded shall include:

* For each person working at the premises on the survey day where they have travelled from to reach the premises and the mode or modes of transport used on that journey. If by Car the number of passengers in the Car
* The aggregate number of Trips undertaken by all persons working at the premises on the survey day
* The mode of transport used on each Trip
* The number of Trips undertaken by Car
* The number of passengers in the Car on each such Trip and whether the person employed at the premises was the driver or a passenger.

**Site Survey – Residential Survey**

This will comprise of a questionnaire for each Dwelling at the Site and will entail the Residents at each Dwelling completing a travel diary for the Specified Week or as applicable Follow Up Week. All references below to Specified Week shall where applicable signify Specified Week or as appropriate Follow Up Week.

Notes

1. The questionnaire shall explain what constitutes a Car, a Car owned by a Resident, a Resident and a Trip.
2. “relevant year” means the year ending at the end of the Specified Week.

The information to be recorded in each travel diary shall include

* A record of all Trips undertaken by each Resident residing at the Dwelling during the Specified Week detailing:-
  + Mode of travel used on each Trip and identifying whether it was by Car/partly by Car;
  + If more than one mode of travel was used details of each mode and the length of each limb of the journey (according to the mode of travel used); the mode used when leaving his Dwelling and the mode used when arriving at his destination
  + If by Car or partly by Car whether the Resident was the driver or a passenger and the number of passengers;
  + The purpose of each Trip (purpose choices to be work, on employers business, education attendance, escorting (e.g. to school), shopping, recreation/leisure, visiting friends and relatives, personal business, other);
  + The final destination of each Trip.
* The number of Residents at the Dwelling during the Specified Week and their age profiles (by banding).
* The number of Cars owned by Residents at the Dwelling during the Specified Week.
* The number of adult Residents at the Dwelling during the Specified Week who are in employment.
* For each such Resident the number of ‘work days’ on which he worked from home. A work day excludes a day when all the workundertaken is in excess of the Resident’s contracted hours (or for any person who is self employed a day when all the work undertaken is outside standard hours)
* The type, age and engine size of each Car owned by each Resident at the Dwelling during the Specified Week and when it was acquired during the relevant year. The same information for any Car owned by the Resident at any time during the relevant year and the period of time during that year when he owned that Car.
* There is to be supplied a reading from the milometer of each Car owned by each Resident during the Specified Week . If the Resident has changed Car since the last survey there is to be supplied an estimate of annual mileage (according to mileage banding agreed with the County Council and provided in the questionnaire) travelled by each Car owned by that Resident during the relevant year. This estimate of annual mileage is to include all travel undertaken by the relevant Car irrespective of whether the Resident was travelling in it.

The survey shall also be designed to ascertain measures that will assist in encouraging Trips by Non-Car Mode

1. Use definition in another Schedule [↑](#footnote-ref-1)