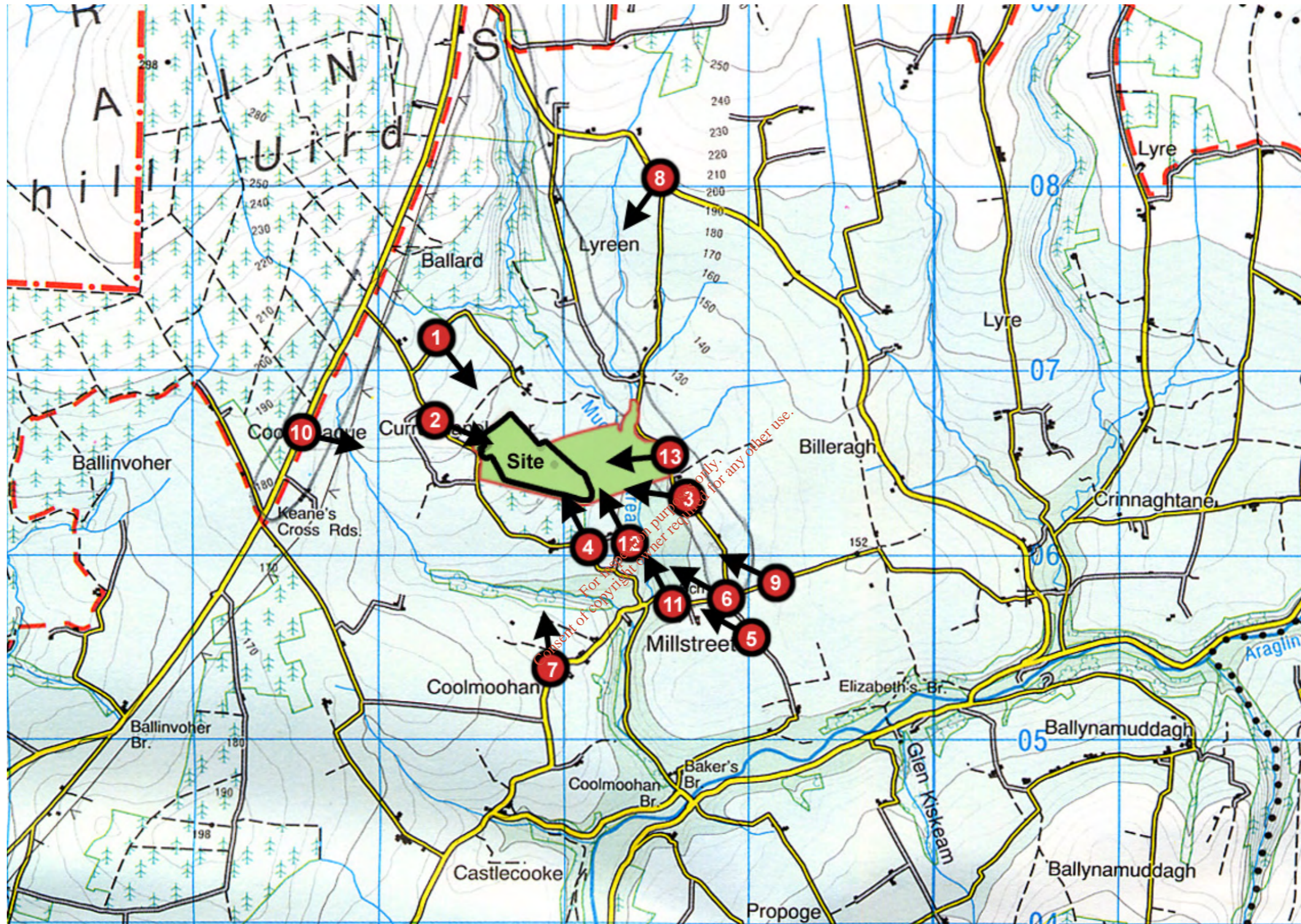


Appendix 11.1

Views

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57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View Location Map
 1:25 000





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As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 1
View from local road to the north west


BRADY SHIPMAN MARTIN



57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 1
 View from local road to the north west


BRADY SHIPMAN MARTIN



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As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 2
 View from local road approaching the site entrance





57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 2
 View from local road approaching the site entrance


BRADY SHIPMAN MARTIN



As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 3
View from the A3 scenic route from east of Muchnagh Stream





57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 3
 View from the A3 scenic route from east of Muchnagh Stream


BRADY SHIPMAN MARTIN



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As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 4
View from closest local road due south of the site


BRADY SHIPMAN MARTIN



As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 4
View from closest local road due south of the site

BRADY SHIPMAN MARTIN



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As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 5
View from high ground on local road at Millstreet to the south east


BRADY SHIPMAN MARTIN



As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 5
 View from high ground on local road at Millstreet to the south east


BRADY SHIPMAN MARTIN



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As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 6
View from the south east from the cross roads at the southern end of the A3 scenic route


BRADY SHIPMAN MARTIN



As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 6
 View from the south east from the cross roads at the southern end of the A3 scenic route





For inspection purposes only
Consent of copyright owner required for any other use.

As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 7
View from local road at Coolmoohan due south of the site





As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

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57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 7
View from local road at Coolmoohan due south of the site


BRADY SHIPMAN MARTIN



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As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 8
View from local road from the north east





As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
 ValeCo

View 8
 View from local road from the north east


BRADY SHIPMAN MARTIN



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As Proposed with 10m planting.

57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 9
View from local road from the south east


BRADY SHIPMAN MARTIN



As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

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Consent or copyright cannot be required for any other use.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 9
View from local road from the south east


BRADY SHIPMAN MARTIN



For information purposes only.
Consent of copyright owner not required for any other use.

As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 10
View from A3 scenic route to the west of the site at Coolaneague


BRADY SHIPMAN MARTIN



As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

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57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 10
View from A3 scenic route to the west of the site at Coolaneague


BRADY SHIPMAN MARTIN



For inspection purposes only.
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As Proposed with 10m planting

57° | 50° | 40° ANGLE OF VISION SCALE 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 11
View from rear of school buildings





For inspection purposes only.
Consent of copyright owner required for any other use.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 11
View from rear of school buildings





For inspection purposes only.
Consent of copyright owner required for any other use.

As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 12
View from closest private residence to the south of the site


BRADY SHIPMAN MARTIN



As Existing



Post Construction (no mitigation)



As Proposed with 2m planting

For inspection purposes only.
Consent of copyright owner required for any other use.

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 12
View from closest private residence to the south of the site


BRADY SHIPMAN MARTIN



As Proposed with 10m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 13
View from the A3 scenic route from east of Muchnagh Stream





As Existing



Post Construction (no mitigation)

*For inspection purposes only.
Consent of copyright owner required for any other use.*



As Proposed with 2m planting

57° | 50° | 40° | ANGLE OF VISION SCALE | 40° | 50° | 57°

PROPOSED ANAEROBIC DIGESTION FACILITY, BALLARD, ARAGLIN, COUNTY CORK.
ValeCo

View 13
View from the A3 scenic route from east of Muchnagh Stream


BRADY SHIPMAN MARTIN

12 ROADS AND TRAFFIC

12.1 Introduction

12.1.1 General

In this section of the report the existing receiving roads environment and traffic conditions are identified. The likely increase in traffic volumes and relative level of traffic impact the proposed development is likely to have on the local road network is assessed. Where appropriate, measures to address the management of the forecast additional traffic on the local road network are discussed.

The traffic elements of this report provide a description of the physical characteristics and land-use requirements in relation to the transport needs of the proposed development and in general is structured in accordance with the advice provided in the Institution of Highways & Transportation document 'Guidelines for Traffic Impact Assessment' (September 1994). This document is recognised by Transportation Planners to represent a structured approach to the preparation of Transport Assessments (formerly Traffic Impact Assessments) and is endorsed by the Traffic Management Guidelines.

12.1.2 Transportation Background

The existing site was granted full planning permission by An Bord Pleanála in 1998 (Reference PL04.105720; Dated 21st August 1998 (Appendix 1.1)). The permission allowed for the development of slurry storage and processing facilities on the site together with increased parking spaces and the retention of then existing facilities and operations.

The grant of permission by An Bord Pleanála endorsed the retention of the then current site activities and ultimately that when fully developed the site was permitted to receive some 30,000m³ of materials and to generate an average of 30 HGV trips per day (60 movements in and out). The maximum daily number of HGV trips was set by condition in the An Bord Pleanála decision, not to exceed 35 (70 movements per day). The granted hours of operation were 0700 to 2100hrs, excluding Sundays.

12.2 Existing Conditions & Proposed Development

12.2.1 Location

The 32ha is accessed principally from the N8 National Primary Road. The site is bounded to the north, east and south by agricultural land and to the west by the LS5679 road (Figure 12.1).

The site is located approximately 6.5 km from the village of Kilworth, 8km southeast of Mitchelstown and 11km northeast of Fermoy. The site is serviced by an existing 200m right of way from LS5679 which is

approximately 1.1 km. from the rural distributor LP1419 which runs between the Mountain Barrack Crossroads and Kilworth.

12.2.2 Existing Facility

In August 1998 planning permission was granted by An Bord Pleanala (Reference PL04.105720; Dated 21st August 1998) for continuation of the existing uses together with development of a facility which included for sludge storage in 8 No. 7.2 m high tanks on the 3 hectare site and was designed to receive biosolids from the agricultural and chemical industries in the general Munster area. The collected wastes were to be blended and the product used as an agricultural fertiliser.

While the proposed 1998 facility did not proceed, the planning approval granted by An Bord Pleanala gave permission for the acceptance of approximately 30,000m³ of organic wastes. The sources of waste product for the previously permitted development will generally be from the same agri-businesses and chemical industries that will supply the proposed combined waste and power facility which is the subject of this planning application.

12.2.3 Site Location in Relation to National Road Network

In a regional roads context the development site is accessed principally from the N8 National Primary Road which, within the bounds of County Cork generally links Cork-Rathcormack-Fermoy-Mitchelstown-Limerick, thereafter the N8 ultimately connects Dublin to Cork.

From Mitchelstown the most direct route to the site is via the Araglin Junction on the N8 to the south of the town. This junction is a staggered crossroad between the N73 from the west, the LP1418 which runs east to the county boundary with South Tipperary, and the N8 which runs north-south through Mitchelstown. Traffic from Mitchelstown bound for the existing site travels east along the LP1418 for approximately 7.6km to the Mountain Barracks Crossroad, thereafter southbound via the LP1419 (between Mountain Barracks Crossroad and the village of Kilworth) for approximately 2km where traffic turns left onto the LS5679 which provides direct vehicular access to the proposed development site. The existing access to the development is located approximately 1km east from the junction of the LS5679 and the LP1419.

From the south the route to site from the N8 is through the T-junction with the R667 located approximately 10km south of Mitchelstown. Thereafter traffic travels approximately 1.2km eastbound along the R667 Regional Road through Kilworth, turning left in the centre of the village to access the LP1419. Travelling north along the LP1419 for approximately 6km, traffic turns right onto the LS5679 which provides access to the existing site.

In summary therefore the principal roads to the site are as follows:

- N8 National Primary Road
- LP1418 From Mitchelstown to Mountain Barracks Crossroad
- LP1419 From Mountain Barracks Crossroad to LS5679
- LS5679 From LP1419 to Site Entrance
- LP1419 From LS5679 south to Kilworth
- R667 from Kilworth West to N8 National Primary Road

12.2.4 Routes Permitted under 1998 Permission (An Bord Pleanála Ref: PL04.105720)

It is stated in Condition 1 of the schedule attached to the 1998 An Bord Pleanála decision that all non-passenger car unit (pcu) traffic leaving the site via the proposed access on the LS5679 shall turn right.

The transportation or haulage routes to and from the facility are clearly defined in the previous permission and include for use of the above primary routes from the N8 together with the use of the LP1420 (LS5674) route generally running north from the Mountain Barrack Crossroads to South Tipperary.

The route for vehicles (Figure 12.1) to and from the N8 at Kilworth is described in Condition 2(a) as *“from R667 to Kilworth via. LP1419 to the junction with LS5679 and hence along this road to the site (use of the LS5683 is also permitted)”*.

The route for vehicles to and from the N8 at Mitchelstown is described in Condition 2(b) as *“from N8 at Mitchelstown via LP1418 to Mountain Barrack Cross Roads and then along LP1419 towards the junction with LS5679 to the site”*.

The route to South Tipperary, located to the north of the site is described in Condition 2(c) as *“from the site along the LS5679 to its junction with LP1419 and along LP1419 through Mountain Barracks Cross Roads and then via. LP1420 to the South Tipperary County Boundary at Glenduff Bridge”*.

12.2.5 Roads Objectives which may Influence Traffic Conditions

In summarising the current transport policies for County Cork reference has been made to The National Development Plan 2000-2006 and the Cork County Development Plan.

The National Development Plan 2000-2006, in terms of infrastructure considerations aims to build upon and enhance Ireland’s continuing economic and social development by means of a concentrated and focused development strategy for the national primary road network. In relation to the impact on in the vicinity of Mitchelstown and the proposed development, the strategy can be broadly related to the provision of enhanced road and public transport infrastructure. Government policy for the improvement

of national roads, as outlined in the National Development Plan, provides for the development of five major inter-urban routes which include Dublin to the Border, Dublin to Galway, Dublin to Cork, Dublin to Limerick and Dublin to Waterford. It is proposed that these routes will be constructed to motorway or high quality dual carriageway standard.

A summary of current and forthcoming road construction schemes which will benefit the strategic roads network in the general vicinity of Mitchelstown and the proposed development site is provided hereunder.

12.2.5.1 Schemes Under Construction

N8/N73 Mitchelstown Relief Road. This project, which forms part of the overall strategy for the N8 route bypassing Mitchelstown, consists of the construction of 4.1 km of single carriageway, incorporating four roundabouts and a bridge over the Gradoge River. Construction commenced in May 2005 by RoadBridge Ltd.

N8 Rathcormac/Fermoy Bypass (PPP Scheme). This scheme comprises 17.5 km of motorway together with associated interchanges and local road realignments and includes a 450m long viaduct spanning the Blackwater Valley. The scheme will be tolled. This is a PPP scheme and the contract was signed and construction commenced in June 2004. The contract to operate the road (toll) was signed on the 11th June 2004 and will extend for 30 years from that date. The construction is anticipated to take approximately 3 years and the operators will be responsible for collection of tolls for a period of approximately 27 years.

12.2.5.2 Major National Schemes in Planning

M8 Cullahill/Cashel. This scheme comprising 45km of High Quality Dual Carriageway was approved by An Bord Pleanála in December of 2004.

M8 Cashel/Mitchelstown. The National Roads Authority reports that the CPO/EIS for this scheme should be published this year. The scheme comprises 32km of High Quality Dual Carriageway.

M8 Mitchelstown/Fermoy. As we understand from discussions with the Local Authority the CPO/EIS for this scheme was published on later September of this year. The scheme comprises 22km of High Quality Dual Carriageway. No timetable for construction has been agreed but it is considered likely by the Local Authority that this road will be open before summer 2009. It is expected that the above 32km section between Cashel and Mitchelstown would be completed within a similar timescale. The route maps for this scheme shows the Road to run generally to the west of the existing N8 in the vicinity of Kilworth, crossing the N8 at Ballybeg (directly west of proposed site) thereafter continuing in a northeasterly direction to the west of Mitchelstown. It is proposed that the scheme will provide access to the LP1418 which runs generally east-west from Mitchelstown to Mountain Barracks Crossroad which is located some 2km north of the proposed development site.

12.2.6 Quantification of Current Traffic Flows on Links and Junctions

12.2.6.1 Scope of Study

In establishing the scope of a traffic impact assessment the Institution of Highways and Transportation (IHT) recommends the following:

“Although most TIAs relate to large or extensive developments it should be recognised that the movement of two milk tankers to a remote farm down a country lane may, in certain circumstances, be deemed to be unacceptable by the planning authority. In contrast, some city centre developments may attract a large proportion of their trips by public transport. This is often ignored because, whilst car trips form a much lower relative trip proportion, their impact often requires more detailed analysis.”

(Reference - IHT Guidelines for Impact Assessment: para 7; page 5)

“It is, therefore, not possible to provide any hard and fast rules as to what constitutes a significant traffic impact and hence one for which a full traffic impact assessment should be undertaken. The Guidelines therefore recommend that a TIA should normally be produced where one or other of the following thresholds are exceeded: (Reference - IHT Guidelines for Impact Assessment: para 8; page 5)

- *Traffic to and from the development exceeds 10% of the two-way traffic flow on the adjoining highway*
- *Traffic to and from the development exceeds 5% of the two-way traffic flow on the adjoining highway, where traffic congestion exists or will exist within the assessment period or in other sensitive locations*

These thresholds should be applied in the absence of alternative guidelines from the highway (roads) authority in the form of approved or adopted policy.”

(Reference- IHT Guidelines for Impact Assessment: para 9; page 6)

“It is recommended that the threshold approach should also be used to establish the area of influence of the development. Hence the study should include all links and associated junctions where traffic from the development will exceed 10% of the existing traffic (5% in congested or other sensitive locations) or such other threshold as may have been adopted by the highway (roads) or planning authority.” (Reference - IHT Guidelines for Impact Assessment: para 13; page 6)

In accordance with the above advice we have included in our assessment locations on the local roads network considered as having the ‘potential’ to experience increases in traffic flow of 10% as a direct result of additional traffic generated by the proposed development.

12.2.6.2 Data Collection - Traffic Surveys

In establishing the scope of the traffic study for this development the routes permitted under the previous planning decision have been reviewed. From initial traffic generation estimates and a review of the previous permission it was estimated that the influence of any additional traffic generated by the proposed development was not likely to be significant (+10%) beyond the immediate vicinity of the existing site. Upon reaching the National Primary Roads network the traffic volumes generated by the proposed development are low in relation to normal expected daily flows on the N8 and are likely to be considered negligible in such context (percentage increase in the total volume of traffic on the N8 are likely to be in the region of less than one half of one percent).

Notwithstanding the above, in the interest of a comprehensive assessment of the existing and likely future traffic patterns on the local roads network in the vicinity of the proposed development 12 hour classified turning count surveys at the following junction locations were carried out (See Appendix 12.1).

- N8 National Primary Road Intersection with the N73 (Staggered Crossroad)
- LP1418/LP1419/LS5674 Mountain Barracks Crossroad (Crossroad)
- LS5679/LP1419 From Mountain Barracks Crossroad (T-Junction),
- N8 National Primary Road Intersection with R665 (Signal Controlled Crossroad)
- R665 Intersection with LS5674 South Tipperary (T-Junction)
- R667 Intersection with LP1419 at Kilworth

The above locations are considered generally to define the routes previously endorsed by An Bord Pleanála as haulage routes to and from the site, for an average of 60, and a maximum of 70 HGV movements, under the application determined in 1998.

The former three classified traffic turning counts were undertaken on Tuesday 1st March 2005 and the latter three on the Tuesday 5th April 2005. The surveys were carried out over the period 07:00-19:00hrs using video surveillance. As is normal practice, the surveys were carried out on a 'neutral' day of the week, that being Tuesday. A Tuesday was selected as the traffic flows manifest on this 'neutral' day of the week are normally expected to be representative of 'typical' traffic conditions on the local roads network. It must be noted that the above surveys were carried out during neutral months of the year and therefore also include for normal daily schools traffic.

12.2.6.3 Data Validation

An estimate of the Annual Average Daily Traffic volumes (AADT) on the N8 National Primary Road was derived through the use of the NRA document RT.201. 'Expansion Factors for Short Period Traffic Counts'. The published expansion factor for 'urban commuter routes' for a Tuesday in March is 1.43±7% for the count period 08:00-19:00hrs.

The two-way flow on the N8 recorded at the N8/N73 Junction (Southern side of Mitchelstown) over the prescribed period in the March surveys was 10,665 vehicles, accordingly from the March survey data, RT.590 forecasts that the current AADT on N8 National Primary Road in the vicinity of the N8/N73 count site should fall in the range 14,183 to 16,318 vehicles.

For the April survey data collected at the N8/R665 Junction (Northern side of Mitchelstown) the two-way traffic flow recorded on the N8 over the 08:00-19:00 period was 10,791 vehicles. From the April survey data RT.590 (1.41±9%) forecasts that the current AADT on N8 National Primary Road in the vicinity of the N8/R665 count site should fall in the range 15,318 to 17,407 vehicles.

In order to cross reference or validate the above data, the closest National Roads Authority automatic traffic counter on the N8 is Counter Reference N8-09 located some 5km south of Mitchelstown at Kilworth Camp. The information provided at www.nra.ie for Kilworth Camp shows that the estimated AADT on the N8 for 2005 is approximately 13,134 vehicles.

Notwithstanding that the National Roads Authority count site is some 5km south of Mitchelstown, and the fact that the two short term traffic survey sites are located at opposite ends of the town, the general correlation of AADT forecasts at the survey and count locations is considered an indication that the surveyed traffic flows are likely to be representative of normal or typical daily traffic flows expected on the N8 National Primary Road. The higher figures resulting from the traffic count derived calculation may be explained by the proximity to the urban centre of Mitchelstown and would therefore include additional local traffic associated with the town and its environs.

The roads leading to and from the proposed development site are not NRA roads and therefore there is no similar long term traffic data against which to cross-reference the count data at these sites.

It is accepted that traffic flows at any given site will fluctuate on a daily basis. Generally on busy commuter routes such as the N8, these daily fluctuations could be expected to be ±10%. On lesser trafficked local roads fluctuations can vary to a greater degree. For example seasonal operations and deliveries at farms or forestry lands may generate fluctuations of a high order of magnitude in relation to the base or typical traffic flows on such local roads. The traffic data collection company reported no such traffic intensifying operations during the period of the traffic counts accordingly for the purposes of this assessment it is not considered unreasonable to assume that if the data for the N8 is representative, the traffic data for the other sites on the local roads is similarly likely to be representative for the purposes of the traffic analysis provided herein. For the purposes of this report, it is assumed that the traffic patterns and trends manifest on the N8 will in general be representative of the typical patterns in traffic flow on the local roads network served from the N8 in the vicinity of Mitchelstown.

12.2.6.4 Daily Traffic Patterns on N8

NRA Counter Reference N8-09 is located some 5km south of Mitchelstown at Kilworth Camp. There are a number of local road junctions on the N8 between the survey site and Kilworth Camp,

nevertheless in the following Table 12.1 provides the survey data on the N8 at the N73 junction and the data recorded at the NRA automatic count site at Kilworth Camp for March 1st 2005 for the same 12 hour period.

Table 12.1 Survey Data and NRA Recorded Data for N8 – Tuesday 1st March 2005

Hour Ending	Survey Data N8/N73		N.R.A Counter -Kilworth		Difference	
	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound
08:00	569	386	598	370	-5.1%	4.1%
09:00	555	568	497	420	10.5%	26.1%
10:00	505	518	424	445	16.0%	14.1%
11:00	435	451	374	349	14.0%	22.6%
12:00	416	408	361	317	13.2%	22.3%
13:00	459	419	357	329	22.2%	21.5%
14:00	411	477	327	353	20.4%	26.0%
15:00	419	498	339	402	19.1%	19.3%
16:00	506	462	411	385	18.8%	16.7%
17:00	480	482	365	464	24.0%	3.7%
18:00	549	521	422	522	23.1%	-0.2%
19:00	519	607	373	578	28.1%	4.8%

It can be seen from the above Table 12.1, that despite the distance between the two count sites, and the number of junctions between them, there is a reasonable correlation between the total volumes of traffic recorded traveling northbound and southbound along the N8.

It can nonetheless be seen that the figures at the survey site in Mitchelstown are somewhat greater in practically every hour. The reason for this is not immediately clear. It is however suggested that, since the survey site is located in the town, the likelihood is that there is additional local traffic associated with the functioning of the town and its environs (i.e. schools traffic, local shopping, local employment etc.) which appears in the survey data but might not necessarily appear on the N8 within a 5km radius of the town (i.e. at Kilworth Camp). This phenomenon is highlighted by the higher traffic flows recorded in the surveys in the middle of the day, and the relatively similar figures recorded in the peak hours. As can be appreciated, local drivers would most likely avoid the peak commuter peak if it were practicable to do so.

It can be seen from the data provided in Table 12.1 that the predominant flow of traffic is southbound in the morning, with a reversal in this pattern in the evening peak hour period.

12.2.6.5 Monthly Traffic Patterns on N8

The NRA data for count site at Kilworth Camp Ref: N08-09 has been examined for the period 2003-2005 inclusive, in order to determine if there are any monthly or seasonal variations or trends in the normal volumes of traffic using the N8 National Primary Road, and therefore the general road network in the vicinity of Mitchelstown. The following Figure 12.2 shows a graphical representation of the NRA recorded data by total traffic flow.

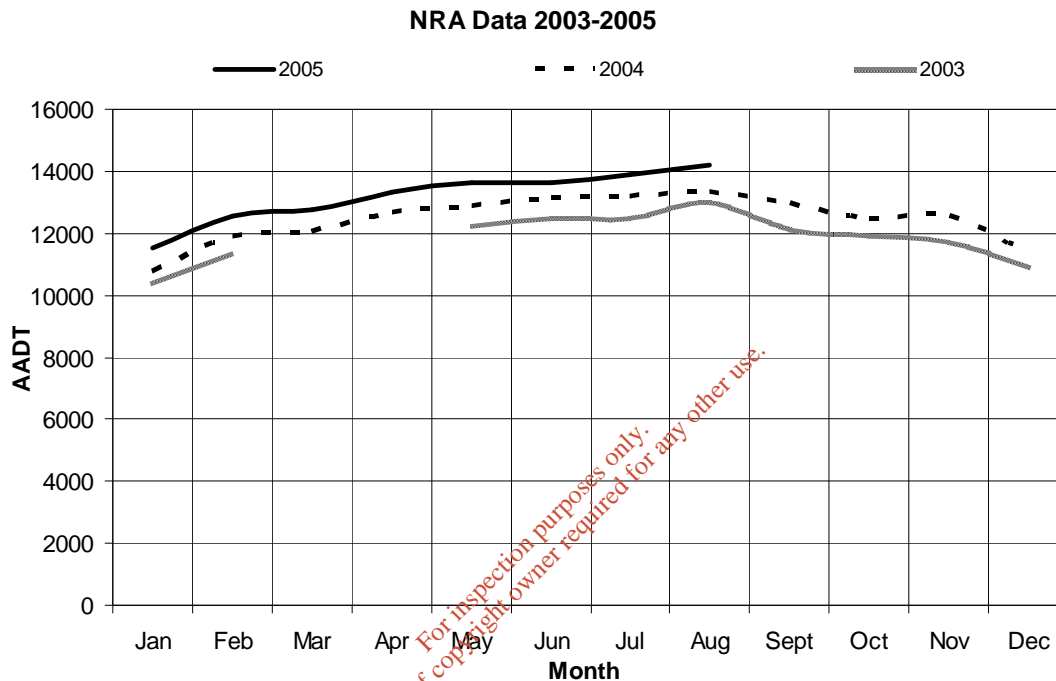


Figure 12.2 Monthly Profile of Traffic Flows on N8 at NRA Site N8-09

It has been established that the period of greatest 'daily' traffic flows on the N8 occurs typically in the month of August. This type of increase over the month of August has been observed on other national routes carrying tourist traffic. For example this phenomenon is most pronounced on the N11 route to the north of Wicklow. From an assessment of the NRA 'daily' traffic figures for 2003-2005 it has been established that total daily traffic flows in August can, on average, be expected to be approximately 8.8% higher than in the count month of March. From Figure 12.2 above it can be seen that this is a trend which is reflected in successive years of data.

In order to investigate further the likely monthly and seasonal traffic patterns on the N8 in the following Figure 12.3 we provide an assessment of the morning and evening peak hour traffic flows for every Tuesday for 2004. It can be seen from the figures that although daily traffic flows might increase on a monthly basis, this trend is expected to be from tourist traffic which is not generally manifest on the network in the peak commuter periods. The morning and evening peak hours shown in Figure 12.3 are considered generally to bear this out. It can be seen from the figure that the peak hour traffic flows

remain relatively steady throughout the year. The morning and evening peak hour traffic flows recorded in March traffic surveys were 1,123 and 1,070 vehicles respectively. In the April traffic survey data the corresponding figures were 988 and 1,022. As discussed earlier, these figures, although marginally higher than the averages recorded at Kilworth Camp, are considered to be representative for the purposes of the assessments provided in this report.

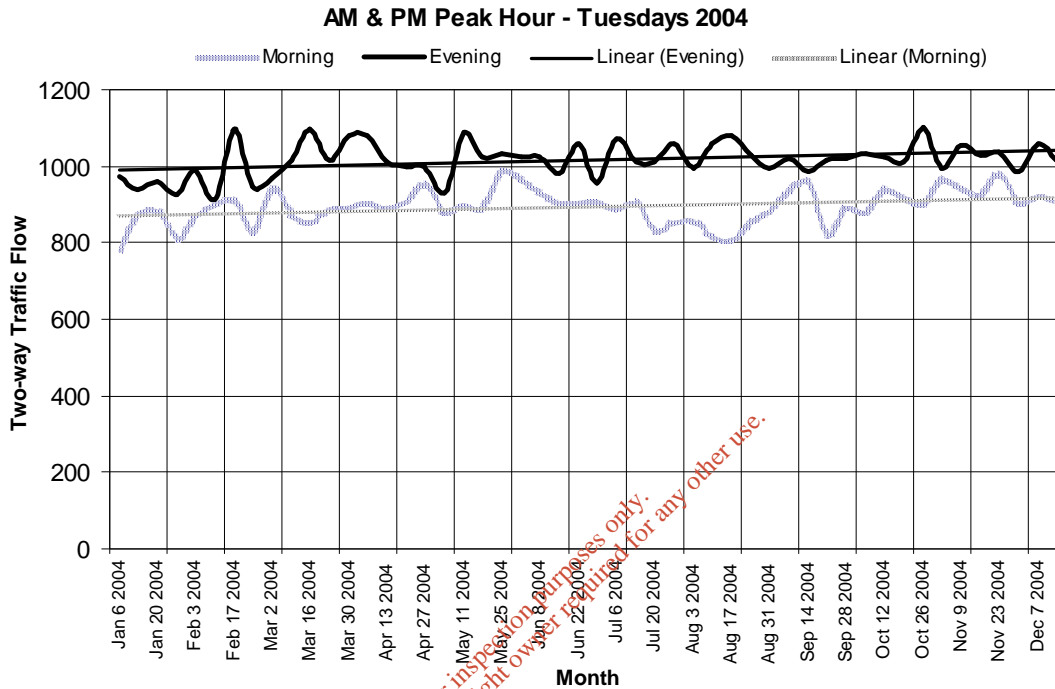


Figure 12.3 Profile of Peak Hour Traffic Flows on N8 – Tuesdays in 2004

12.2.6.6 Identification of Peak Hour Period on Greater Roads Network

In relation to the peak period on the greater roads network in the vicinity of the existing and proposed development site, in the following Figure 12.4 is a graph of the northbound and southbound traffic flows on the N8 as recorded by the NRA at the automatic counter location at Kilworth Camp. The data shown in the figure is that published by the NRA for a typical Tuesday during 2005.

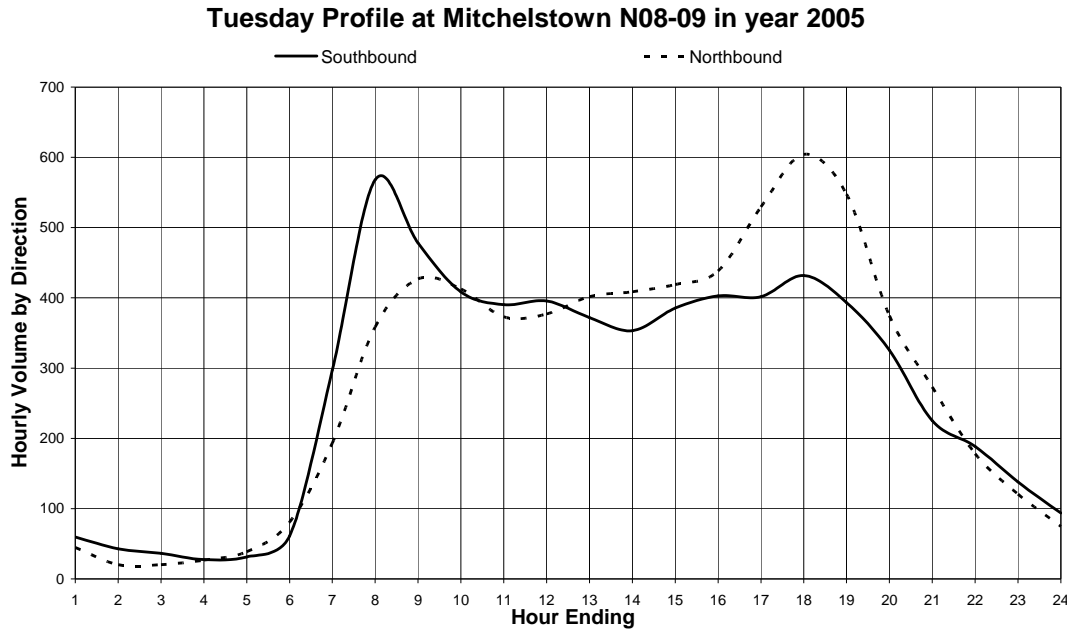


Figure 12.4 N8 Daily Traffic Profile Recorded at NRA Count Site N8-09

From the data recorded at the N8-09 count site it can be seen that during the typical weekday the morning peak in traffic occurs in the period 08:00 to 09:00hrs. The peak hour period in the evening is shown to occur in the hour ending 18:00hrs.

12.2.6.7 Traffic Flows Past Development During Peak Hours

Traffic flows on the LS5679 past the existing site entrance are considered very low. Over the 12hr period of the traffic counts 47No vehicles were observed to enter the LS5679 from the LP1419 whilst 50No were recorded to emerge from the LS5679 onto the LP1419.

In the morning, although there is a higher proportion of traffic between the hours of 07:30 and 10:00 there is no clearly identifiable 'peak' period. Notwithstanding this, the morning commuter peak on the N8 has been calculated from NRA data to occur between 08:00 and 09:00hrs. During this period a total two-way flow on the LS5679 of 8No vehicles was recorded, 2No of which entered the LS5679 from the LP1419 whilst 6No entered onto the LP1419 from the LS5679.

In the evening the peak hour period of 17:00-18:00hrs a total of 15No two-way vehicle movements were recorded on the LS5679 at the junction of the LP1419 and LS5679. Of these movements 6No were from the LS5679 to the LP1419 and 9No were onto the LS5679.

The maximum number of vehicles in any one hour using this local junction was 17No and was recorded during the period 17:30 to 18:30. During this period some 12No vehicles were observed entering the

LS5679 from the LP1419, with 5No. existing from the LS5679 to the LP1419 . A copy of the survey data together with a location map of the junctions surveyed is provided in Appendix 12.1.

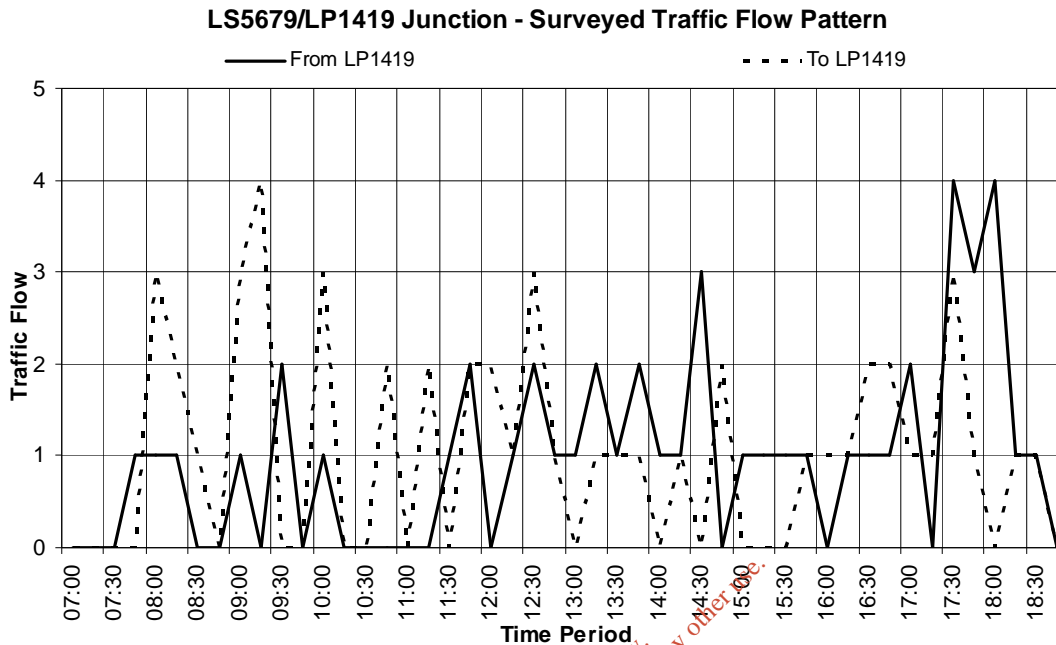


Figure 12.5 above is a graph showing the total flow of traffic at the junction of the LP1419 and the LS5679 as recorded during the 12 hour survey period. It can be seen from the figure that traffic flows to and from the LS5679 are low. During the day there is a relatively consistent volume of traffic in both directions nonetheless, as outlined above, the survey data shows a marginal pattern of tidal commuter-related traffic where the predominant flow is onto the LP1419 in the morning and from the LP1419 in the evening.

12.2.6.8 Summary of Surveyed Traffic Flows (07:00-19:00hrs)

The following Table 12.2 provides a summary of the traffic flows recorded over the 12 hour period of the traffic counts undertaken in March and April 2004.

Table 12.2 Surveyed Two-way Traffic Flows over 12 Hour Period (07:00-19:00hrs)

Road Link	CAR	LGV	HGV Rigid	HGV Artic	Agri	TOT
N8 National Primary Road (South of Mitchelstown N73)	8632	819	648	1478	43	11620
LP1418 Running East-West from Mitchelstown to Mountain Barracks Crossroad						
LP1418 at Mitchelstown adjacent to N8	3859	248	72	36	27	4242
LP1418 at Mountain Barracks Crossroad (Western Arm)	205	9	9	3	3	229
LS5674 Running North-South from Mountain Barracks Crossroad to R665 in Tipperary						
LS5674 North from Mountain Barracks Crossroad	375	32	9	7	10	433
LS5674 at R665 in Tipperary	296	70	12	2	23	403
LP1419 Running North-South from Mountain Barracks Crossroad to Kilworth						
LP1419 Measured at Mountain Barracks Crossroad	443	41	7	7	10	508
LP1419 Measured at LS5679 (North of Junction)	424	43	5	7	9	488
LP1419 Measured at LS5679 (South of Junction)	446	43	7	6	9	511
LP1419 in Kilworth	2245	377	99	45	33	2799
LS5679 Running East-West Connecting Site Entrance to LP1419						
LS5679 Measured at LP1419	84	6	2	5	0	97
R665 Running East-West from Mitchelstown to Tipperary						
R665 East of Mitchelstown	2683	404	135	212	9	3443
R665 West of LS5674 in Tipperary	501	98	37	26	7	669
R665 East of LS5674 in Tipperary	749	154	47	28	26	1004
R667 Running East-West from N8 through Kilworth						
R667 West of LP1419 in Kilworth	1564	264	74	19	28	1949
R667 East of LP1419 in Kilworth	961	157	29	32	25	1204

It can be seen from the above data that the roads network within a 3-4km radius of the site is indeed lightly trafficked. In general, the greater the distance from the proposed development the more dilute the likely impact of traffic generated by the proposed facility. Indeed, it can be appreciated that in the context of the N8, and the emerging N8/N73 Relief Road and the planned M8, the total volumes of traffic generated by the proposed development are highly likely to be negligible.

12.3 Traffic Generation

12.3.1 Daily Works Traffic Generation

For the purpose of the report 'Works Traffic' is considered to be that traffic transporting wastes to the site and exporting product; generally comprised of HGV.

The facility has been designed for continuous operation 24 hours a day 365 days a year. There will be no scheduled shut down period of the facility for maintenance/holidays periods.

Waste will be accepted at the facility in fully enclosed tankers and covered trailers between the hours of 07:00-21:00hrs, Monday to Saturday inclusive with no deliveries on Sundays or public holidays except in emergency situations or for essential maintenance. Accordingly it is assumed in the estimates of traffic generation that the import of waste materials will be carried out for approximately 298 days per year.

The breakdown of the various waste streams is provided in Section 2.2. It is noted that the waste types and quantities shown in Section 2.2 will be subject to variation based on market availability and it is expected that one waste stream might be subject to substitution by an alternative waste stream. For the purposes of the section of the report nonetheless it is assumed that the relative breakdown in the volume of liquid/sludges and dry waste will remain essentially constant.

The facility will also produce a byproduct of approximately 29,000 tonnes per annum of solid fertiliser which will be sold to the agricultural and horticultural industries. Fertiliser pellets and minerals will be stored at the site prior to dispatch for use in the agricultural and horticultural industries. It should be noted that the size of the storage hall has been governed by the need for total storage of pellets and materials between the months of October and March when landspreading is prohibited. Accordingly it is assumed in the estimates of traffic generation associated with the export of materials that this activity will only be carried out for approximately 149 days per year.

It is proposed that sludge or liquid waste will be transported to the site in articulated tri-axle stainless steel cylindrical pressure tankers with a capacity of 26 cubic meters and an ultimate payload of 28,100Kg (average payload 27 tonnes).

Dry materials will be delivered to the site by articulated vehicles drawing trailers. The trailer type will be STAS 64cu.yd. Tri-axle Tipping Trailers. The ultimate payload of these tipper trailers is some 30tonnes (average payload 28 tonnes).

By way of comparison the vehicles used at the site at the time of the previous planning application were a 14m³ Rigid Body Tanker, 18m³ Articulated Tanker, a 22m³ Articulated Tanker and a 24m³ Articulated Tanker. By reference to Department of Agriculture published data, Slurry is estimate to weigh 1.0 tonnes per m³, accordingly it can reasonably be expected that the maximum vehicle payload delivered

to the site at the time of the previous application would have been in the region of 24 tonnes. It should be noted nonetheless that in determining the previous application An Bord Pleanála did not limit the payload of delivery vehicles, only the daily number thereof. Although, at 27 and 28 tonnes the current proposed payloads are marginally higher than this 24 tonne figure, it should be appreciated that it is not simply the total vehicle weight which is considered when assessing the structural capacity of the road. The composition of vehicle axles, and the axle loading is the primary factor in such calculations. Both the tankers and bulk haulage vehicles to be used at the site will employ modern tri-axle trailers and it is not expected that the increase in the average tonnage per vehicle will have any greater impact on the underlying carriageway structure.

It is expected that the vehicles used to deliver dry wastes to the site could reasonably be used for the 'backhaul' of such dry product (loose). It is nonetheless expected that much of the dry product will be bagged on site and exported in curtain sided trailers. In general curtain sided trailers vary from 7.5 to 13.6m in length and 22-44 tonnes payload capacity with between 1 to 3 axles. It is estimated for the purposes of the forecasts provided in this report that the average payload of curtain sided trailers used at the site will be 28tonnes.

The potential traffic generation of the site based is considered through a combination of worst case scenarios. For example, it is presumed that product will be exported only over 6 months (presumes that no purchaser will stockpile product) and that totally separate vehicles would be required to transport the product. It should however be noted that such by-product could reasonably be backhauled by vehicles delivering material to the site. In addition, the prohibition of the spread of product on lands between October and March does not necessarily preclude its sale and distribution over those months.

The IHT guidelines for the use of databases in the forecast of likely traffic generation at a proposed development advises that,

“having assessed the database to derive an estimate of trip attraction, professional judgement has to be applied in determining how the information should be used. It will be noted that that for most land uses the spread of data is very large and hence the use of average trip rates as a guide to the design of junction layout or the sizing of a car park could lead to under or over-provision. As the real cost of undersizing infrastructure is frequently very considerable, since additional land cannot be made available later, it is recommended that developers and highway authorities should adopt a robust forecast i.e. a value higher than the average. An approach that is currently in widespread use is to consider a range of values with the higher value being the 85th percentile of the data sample (i.e. .the trip rate exceeded by only 15% of the sample) and the lower value being reflected by the average trip rate.”

In line with the above principle it is considered reasonable that an upper bound value for 'assessment' purposes would likely result from the assumption that all vehicles delivering to the site would not be fully loaded, but would be carrying only 85% capacity loads. The assessment payloads for tankers would

therefore be 23.9tonnes whilst that of tipper trailers is 25.5tonne. These figures allow for every second vehicle to be full whilst every other vehicle is only 70% filled. The use of these figures should be viewed as representing an extreme case simply as an upper bound for assessment since it is clearly unlikely to be economically infeasible for all loads to be partial.

Based upon the above general logistics the following Table 12.3 shows the estimated assessment works traffic generation expected at the site on a daily basis when the facility is eventually operating a full capacity.

Table 12.3 Estimated Assessment Works Traffic Generation when Fully Operational (HGV)

Waste Type	Payload (tonnes)			Annual Quantity	Days Per Year	Daily Quantity	Vehicles Trips	
	Max	Typical Average Ult.	Upper (85%)				Typical Average Ult.	Upper Bound 85%
Liquid Wastes	28.1	27	23.9	190000	298	638	24	27
Dry Wastes	30	28	25.5	60000	298	201	7	8
Product (Exported)	30 - 40	28	25.5	29000	149	195	(7)*	(8)*
TOTAL	October to March – Product Stored						31	35
TOTAL	April to September – Product Exported						38	42

(*) Materials exported between April-September

In practical terms when the site is operating at ultimate capacity, it is likely that all inbound loads will be close to the capacity. In terms of the export of product nonetheless it is likely that these would be more reasonably represented by the 85th percentile rates derived for use in this assessment.

From Table 12.3 it can be seen that, during the 6 month period when product is stored at the site, works traffic generation is likely to be approximately 31 HGV trips or 62 vehicle movements per day with an assessment or expected upper bound of 35 trips or 70 vehicle movements. In order to provide a frame of reference, these figures are practically coincident with the levels of traffic generation granted by An Bord Pleanála in the 1998 decision.

During the 6 month period over which it is assumed product will be exported from the site it can be seen that if all product is bagged (no backhaul whatsoever) then traffic generation is likely to increase by 7-8 vehicle trips per day, giving a likely average of 38 vehicle trips, and an upper bound assessment figure of 42 vehicle trips.

Notwithstanding the above, it is likely that some of the material exported from the site will be exported in loose form. This loose product would be backhauled by the vehicles delivering dry materials to the site.

As can be seen from the above table, if all material were to be exported in loose form then the backhaul of product from the site would require the same number of vehicles as is likely to be required in delivering dry wastes to the site. Accordingly it is expected that the export of materials from the site could be fully accommodated by the process of backhaul and would therefore not generate any additional traffic.

The above average traffic generation of works HGV does not assume that vehicles will be ultimately laden. The assessment average is considered to account for the occurrences of partial loads entering, and indeed leaving the site and is considered representative of likely operations and thus satisfactory for the purposes of the analyses provide herein. The assessment figure representing 85% partial loads is provided in the interest of a robust assessment figure expected to represent an upper bound figure of traffic generation occurring infrequently at the proposed site.

When the facility is fully operational it is assumed that there is not likely to be any seasonal fluctuations in the rate of waste acceptance at the site. As outlined earlier nonetheless product is assumed to be stored at the site and only delivered over the six month period between April and September (inclusive). This is presumed a worst case scenario with respect to byproduct export logistics.

The calculations indicate that on average (assuming export in separate curtain sided vehicles) the proposed development is likely to generate an average of between 31 and 38 works vehicle trips per day (62 – 76 movements). The assessment upper bound figure is likely to be 35 to 42 vehicle trips per day (70 – 84 movements). The latter being an upper bound generation considered likely to occur only occasionally.

The likely works traffic generation at the site from October to March will be equal in number to that granted permission by An Bord Pleanála in the 1998 decision. For the other 6 months of the year, the export of materials has the potential to increase the daily traffic generation rate by an average of 7 trips per day (assuming *all* product is bagged and exported in curtain sided trailers). However, as it is likely that approximately half the product leaving the site will be backhauled. Based on this assumption the traffic generation rate between April and September is estimated to be on average 35 vehicle trips (70 movements), with an assessment upper bound of 40 vehicle trips (80 movements). These figures constitute an increase in traffic generation of approximately 15% over those granted in the 1998 An Bord Pleanála decision.

12.3.2 Daily Works Traffic Patterns

The proposed facility will be operational in terms of material receipts between the hours of 07:00 and 21:00 which provides a total delivery period of some 14 hours. Nevertheless for the purpose of establishing a robust arrival/departure pattern, if it were presumed that say only 85% of the delivery time were properly utilised this would reduce the 14 hour period to approximately 12 hours. Given the level of control which will be enforceable at the facility, it is not considered unreasonable to assume a relatively steady distribution of traffic throughout the available delivery period.

Given a user rate of 85% and thus 12 hours, it is estimate that between October to March the proposed development would be likely to generate an average of 2.58 HGV trips per hour or 5.17 HGV movements per hour throughout the day. If these figures are rounded up to 3 and 6 respectively, this would show the site to generate a steady flow of 3 works HGV into the site and 3 works HGV out of the site over a period of approximately 10 hours and 20 minutes which is less than 75% of the entire 14 hour time period in which deliveries might reasonably occur.

Based on the same principle, that only 12 hours of the available 14 were to be productive, the 'upper bound' assessment traffic generation for the period October to March, would be 2.92 HGV trips per hour or 5.83 HGV movements per hour. These figures, if rounded up would show 3 vehicle trips to and from the site throughout a period of approximately 11 hours and 40 minutes of the day.

For the period of the year between April and September, when product is exported form the site the proposed development would be likely to generate an average of 2.92 HGV trips per hour or 5.83 HGV movements per hour throughout the day. These figures, if rounded up would show 3 vehicle trips to and from the site throughout a period of approximately 11 hours and 40 minutes of the day. The 'upper bound' assessment traffic generation for the period April to September, would be 3.33 HGV trips per hour of 6.67 HGV movements per hour.

In practical terms therefore, it is assumed from the above that the proposed facility is likely to generate no more than 3 to 4 HGV trips per hour over the course of the day. To put these figures into perspective, a constant rate of 4 HGV to and from the facility in every hour would mean that all deliveries of waste to the site could be undertaken between the hours of 09:00-17:30hrs. Given this estimate, a trip generation rate of 4 HGV would be considered at the higher end of likely hourly works traffic generation at the site.

Form the above it is considered reasonable to presume that works traffic generation is likely to fluctuate from between 2 and 4 HGV trips per hour over the course of the entire scheduled daily delivery period.

Under the Conditions of the 1998 application An Bord Pleanála had permitted that the proposed development could generate an average of 30 HGV trips per day (60 movements in and out) and a daily maximum of 35 trips. It can be seen form the above assessment of HGV generation that the current proposed development is likely to generate an average of 35 trips (70 movements) per day. The upper bound traffic generation, based on the principle of the 85th percentile, indicates a likely upper bound traffic generation of 40 HGV trips (80 movements)

12.3.3 Other Sources of Traffic Generation

Approximately 30 full time staff may be employed at the proposed facility. Valeco will operate an open door policy at the facility, therefore it is anticipated that that there will be approximately 10 visitors during an average working day. Such visitors may comprise general visitors, customers, Local Authority and Environmental Protection Agency staff. Additional traffic movements at the proposed facility may be

generated by deliveries, general maintenance staff, cleaning contractors security and monitoring personnel.

Table 12.4 Estimated Assessment Non-Works Traffic Generation when Fully Operational

Activity	Total	Assumed Daily Traffic Generation		
		Cars	HGV (Rigid)	Time
Operations Staff (30 Persons)	25 No.	25	-	Shifts
General Visitors Incl. monitoring (10 Persons)	5No.	5	-	Through Day
Deliveries (Incl. Post, meter readers etc.)	5 No.	3	2	Morning
Maintenance Staff	3No.	2	1	Through Day
Cleaning Staff	5No.	4	1	Evening
Security Staff	3No.	3	-	Morning/Evening

12.4 Traffic Impact

Tables 12.2 and 12.3 represent the likely 'total' traffic generation at the proposed development when fully operational.

As outlined earlier, during the six months when waste is stored at the site HGV traffic generation at the current proposed site is likely to be equal to that of the similar development granted permission by An Bord Pleanála in 1998. During the six month period when product is exported from the site the HGV traffic generation at the proposed site is likely to increase by approximately 15%.

In order to put the above forecast traffic flows into the context of previous planning decisions at this site, in the decision of 1998 the An Bord Pleanála Inspector assessed the above levels of traffic generation as follows.

“On the basis of 60 HCV's (30 in, 30 out) per day over a 14 hour period (7am to 9pm), this will result in 4 truck movements per hour on the LS5679 and two truck movements per hour, in each direction on the LP1419 (assuming an even split between traffic north and traffic south).”

“Due to the low number of HCV's using the local road network at the present time, the increase in percentage terms is large, however, in numerical terms, this is not the case and provided the roads can be upgraded to accommodate these commercial vehicles in a safe manner, I do not consider that there will be undue impact on the environs.”

“The LP1419 has a carriageway c. 5 metres and it is proposed that this be widened to 5.5 metres (the residents vehicle count on this road was 420 over the 14 hour period which indicates a lightly trafficked road), which the improvements proposed will further upgraded to a standard which can accommodate the proposed increase in HCV's as well as existing traffic without undue hazard. Due to the additional vehicle load now proposed, widening to 6 m would be more appropriate. All vehicles travelling to and from the south will pass through Kilworth Village - on the basis of the 50/50 split on the LP1419, this will result in 30 HCV's over the day, i.e. approximately two per hour. The proposed HCV count on the LP1419 (residents survey) is 15 per day. Any increase in traffic, especially HCV's is noticeable, however, I do not consider this level of traffic increase to be significant in regard to amenity or traffic hazard.”

“The other roads referred to with regard to contributions (LP1418, LP1420, LS5683) and the roads in Tipperary North Riding, Tipperary South Riding and Waterford will be subjected to increased HCV traffic and to facilitate the upgrading of these main routes of travel in order to safely cater for this traffic, I consider the imposition of these contributions to be appropriate.”

Table 12.5, which is based upon the previous Table 12.2 shows the total two-way traffic flows recorded on the various roads serving the proposed development over the 12 hour period of the traffic counts (07:00 to 19:00) together with the *total* traffic generated by the proposed facility.

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Table 12.5 Estimate of Total Two-way Traffic Flows Generated by Proposed Development over 12 Hour Period 07:00-19:00hrs (No allowance made for existing site traffic).

Road Link	CAR	LGV	HGV Rigid	HGV Artic	Agri	TOT
N8 Existing Traffic Flow	8632	819	648	1478	43	11620
Total Traffic Generated by Facility	+46	+0	+4	+42	+0	+92
LP1418 Running East-West from Mitchelstown to Mountain Barracks Crossroad						
LP1418 at Mitchelstown	3859	248	72	36	27	4242
	+46	+0	+4	+42	+0	+92
LP1418 at Mountain Barracks Crossroad	205	9	9	3	3	229
	+46	+0	+4	+42	+0	+92
LS5674 Running North-South from Mountain Barracks Crossroad to R665 in Tipperary						
LS5674 North from MB Crossroad	375	32	9	7	10	433
	+4	+0	+0	+2	+0	+8
LS5674 at R665 in Tipp.	296	70	12	2	23	403
	+4	+0	+0	+2	+0	+8
LP1419 Running North-South from Mountain Barracks Crossroad to Kilworth						
LP1419 at MB Crossroad	443	41	7	7	10	508
	+50	+0	+4	+46	+0	+100
LP1419 at LS5679 (N)	424	43	5	7	9	488
	+50	+0	+4	+46	+0	+100
LP1419 at LS5679 (S)	446	43	7	6	9	511
	+34	+0	+4	+30	+0	+68
LP1419 in Kilworth	2245	377	99	45	33	2799
	+34	+0	+4	+30	+0	+68
LS5679 Running East-West Connecting Site Entrance to LP1419						
LS5679 at LP1419	84	6	2	5	0	97
	+84	+0	+8	+76	+0	+160
R665 Running East-West from Mitchelstown to Tipperary						
R665 East of Mitchelstown	2683	404	135	212	9	3443
	+0	+0	+0	+0	+0	+0
R665 West of LS5674 in Tipp.	501	98	37	26	7	669
	+0	+0	+0	+0	+0	+0
R665 East of LS5674 in Tipp.	749	154	47	28	26	1004
	+4	+0	+0	+4	+0	+8
R667 Running East-West from N8 through Kilworth						
R667 West of LP1419 in Kilworth	1564	264	74	19	28	1949
	+34	+0	+4	+0	+30	+68
R667 East of LP1419 in Kilworth	961	157	29	32	25	1204

The proportions of traffic leaving/entering the proposed development for the north/south will depend upon the source of waste and the destination of product and are thus likely to be dictated by market forces. It is likely that traffic flows north and south of the site will fluctuate on a daily basis, nonetheless in order to quantify the likely influence of development related traffic on the surrounding roads network the above Table 12.5 provides an estimate of likely two-way cumulative traffic flows expected to be typically generated by the proposed facility.

For the purposes of this assessment provided in Table 12.5 it is estimated that there would be a 60/40 split in traffic entering the LP1419 from the LS5679, with 60% of traffic traveling to and from the Mountain Barrack Crossroad. It is estimated that 55% of this traffic will travel along the LP1418 to and from Mitchelstown whilst a maximum of 5% is estimated to travel along the LS5674 to and from the R665 in Tipperary. It follows that 40% of traffic is assumed to travel to and from the N8 via the LP1419 and the R665.

In general, the greater the distance from the proposed development the more dilute the impact of traffic generated. It can be appreciated that in the context of the N8, and the emerging N8/N73 Relief Road and the planned M8, the total volumes of traffic generated by the proposed development are wholly insignificant.

It can be seen from the above data that the roads network within a 3-4km radius of the site is indeed lightly trafficked. Accordingly it can be seen that, as per the Inspector's assessment, the percentage increase in traffic volumes in the vicinity of the proposed development may be relatively high, however this is not the case in numerical terms.

With respect to traffic volumes in Kilworth, it can be seen that in the traffic surveys that the LP1419 in the centre of Kilworth had a two-way traffic flow of 2,799 vehicles, of which 99 were rigid body HGV, 45 were articulated HGV and 33 were agriculture related vehicles. Traffic generated by the proposed development would travel from the LP1419 along the R667 to and from the N8. During the traffic surveys, this section of the R667 was observed to carry some 1,949 vehicles between 07:00 and 19:00hrs, of which 74 were rigid body HGV, 19 were articulated HGV and 28 were agriculture related vehicles.

From the above summary of traffic volumes on the local roads network serving the general area, it is expected that the levels of traffic (average of 2 -4 HGV per hour) would be likely to have an insignificant impact on the capacity of the roads network serving the proposed facility.

12.5 Proposed Roads Improvement Works

The roads network serving the site is currently trafficked by both rigid and articulated HGV. As per the previous An Bord Pleanála decision of 1998 it is expected the general roads network serving the site from the R665 to the north, R667 to the south and the N8 to the west will be upgraded in terms of width and carriageway structure. From an inspection of the roads network, indeed some of the general

improvement works identified in the previous application have been implemented, and the Local Authority is continuing with an ongoing programme of general improvement works to the existing network. Albeit that these improvements will generally benefit and accommodate existing HGV road users, clearly the existing and proposed HGV site traffic will derive benefit from such road improvement works.

The existing access to the site is located on the LS5679. The comments of the An Bord Pleanála Inspector regarding the existing LS5679 are transcribed below.

"The road most affected is the LS5679, this being a narrow county road and in its present state is totally unsuitable for commercial traffic. The proposal is to widen this road from its intersection with the LP1419 as far as the site (1.1 kilometres) and to restrict traffic generated to this section of road (i.e. no access to or from the south-east). It was intended that this road be widened to 4.5 metres, however, with the increase in truck numbers, it is now considered necessary by the planning authority to further increase this to 5.5 metres. I consider this increased carriageway width to be essential to provide for the use by commercial vehicles in a safe manner and to allow for safe passage by existing users. These improvement works will be carried out by the planning authority in accordance with their normal works programme and the costings are based on their current works estimates. The residents count for traffic on this road on 9.6.98 7am to 9pm was 107 vehicles."

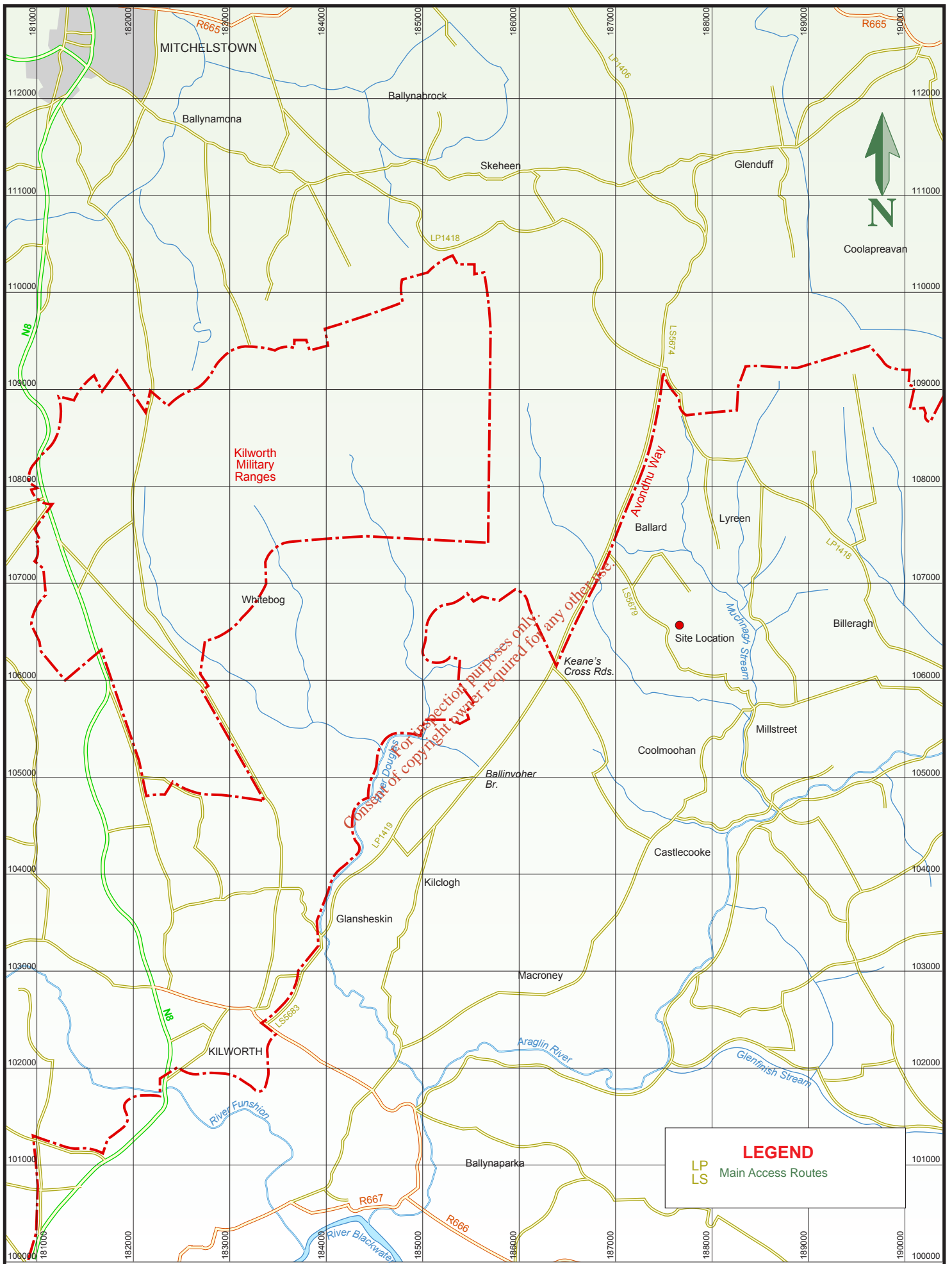
It is not considered likely that the LS679 would be subject of any significant improvement under the current Local Authority general roads improvement programme. As part of the overall development it is proposed therefore to improve the width and structure of the existing LS5679 between the existing site entrance and the LP1419 which is a distance 1.1km. In addition it is proposed to relocate and upgrade the existing site access.

It is proposed to widen the existing carriageway to a minimum width of 5.0m over the entire 1.1km and to provide a series of inter-visible passing bays to accommodate the passage of commercial vehicles. At passing bays, the lane width will increase from 2.5m to 3.25m. It follows that where passing bays in each direction are coincident the aspirational total carriageway width is 6.5m. The proposed roads improvements will be achievable within the bounds of the existing highway lands on the 1.1km stretch of the LS5679 between the LP1419 and the existing site access. Notwithstanding the above, if when constructing the road improvement it is desirable to alter the proposed arrangements for some reason (say to preserve mature trees) the absolute minimum width at passing bays will not be less than 6.0m (5.5m is adequate for opposing HGV to pass carefully on a straight road with offside mirrors retracted). For information please see Appendix 12.2 attached (Drawing No. 02614/01/01/PL01A) which shows a typical passing bay arrangement.

In order that site vehicles can avoid the existing right angled bend on the approach to and near the existing access it is proposed to provide an alternative access. The proposed access will be located on the outside of the existing right angled bend. Visibility for vehicles exiting the proposed site will be significantly improved over the existing arrangement, similarly inter-visibility between vehicles entering

and leaving the site and those on the mainline LS5679 will be greatly enhanced. In order to improve safety and the general flow of vehicles at the existing bend it is proposed to widen the existing eastbound lane on the approach to the proposed entrance to a width of 3.5m, in addition a corresponding passing bay will be provided on the westbound lane immediately to the west of the proposed lane widening. HGV traffic will not be permitted to turn left from the site. The left turn will be physically prohibited with the use of a kerbed island. Following concerns raised during the public consultation period, all movements of car traffic will nonetheless be accommodated. For information please see Appendix 12.2 attached (Drawing No. 02614/01/01/PL01A) which shows a preliminary arrangement of the proposed relocated access.

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 Copyright Douglas & Douglas

LEGEND

LP Main Access Routes

LS Main Access Routes



NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.

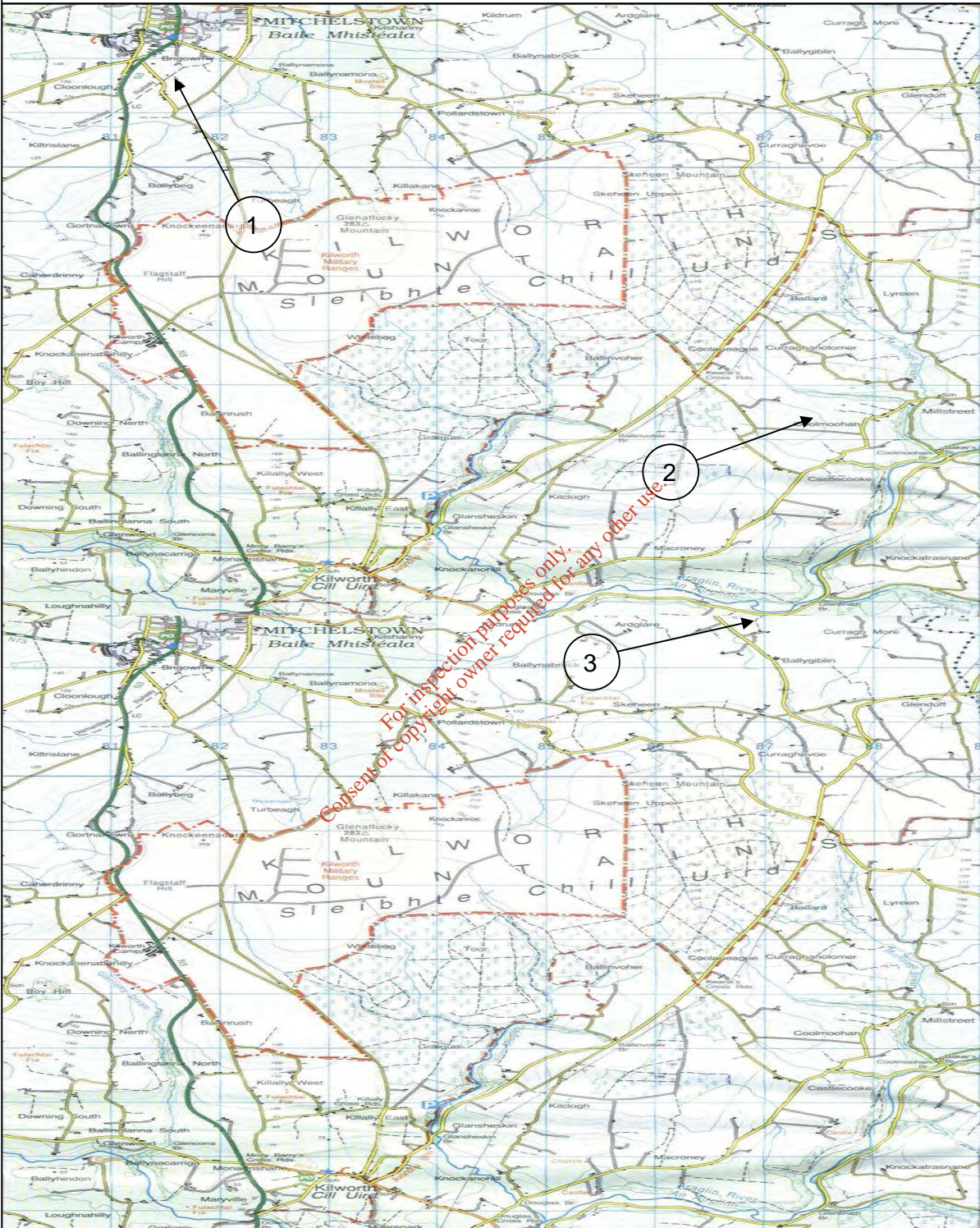
Valeco Main Access Route		
Figure No. 12.1	Job No. C003690 Finalised By - CC	



Appendix 12.1

Abacus Transportation Survey Mitchelstown Traffic
Counts

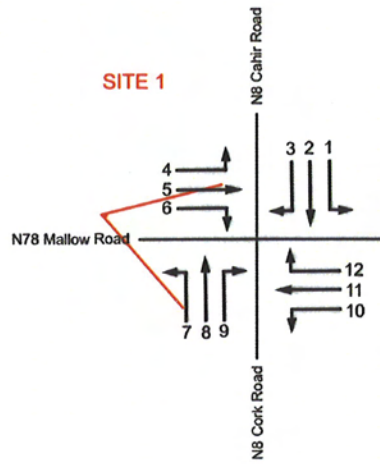
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Site Locations

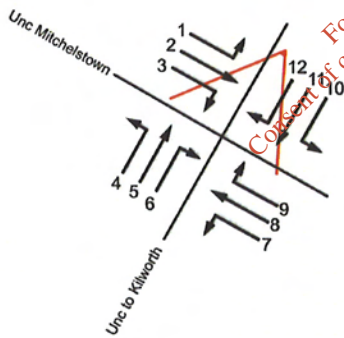


	Job number: ATH/05/034	Job date: 1 st March 2005	Drawing No: ATH/05/034-1	 Transportation Surveys
	Client: TW	Job day: Tuesday	Author: ITK	

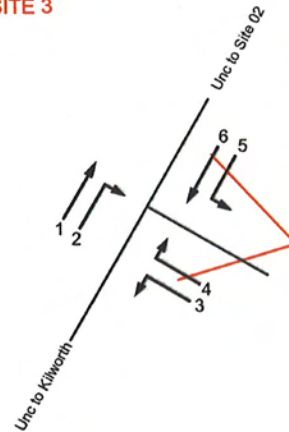
Movement Numbers & Directions





SITE 2



SITE 3



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	Job number: ATH/05/034	Job date: 1 st March 2005	Drawing No: ATH/05/034-2	
	Client: TW	Job day: Tuesday	Author: ITK	

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
07:00	0	0	0	0	0	0	95	4	2	15	0	116	1	0	0	0	0	0	1		
07:15	2	0	0	0	0	2	111	9	8	19	0	147	3	1	0	0	0	0	4		
07:30	1	0	0	0	0	1	108	8	11	20	0	147	4	1	0	0	0	0	5		
07:45	6	1	0	0	0	7	77	12	10	4	0	103	4	0	0	0	0	0	4		
H/TOT	9	1	0	0	0	10	391	33	31	58	0	513	12	2	0	0	0	0	14		
08:00	6	0	0	0	0	6	74	10	9	21	0	114	7	1	1	0	0	0	9		
08:15	11	1	0	1	0	13	82	11	6	12	0	111	6	1	0	1	0	0	8		
08:30	22	2	0	0	0	24	77	15	6	24	0	112	5	1	1	0	0	0	7		
08:45	24	2	0	1	0	27	61	5	7	7	0	90	13	0	1	0	0	0	14		
H/TOT	63	5	0	2	0	70	294	41	28	64	0	427	31	3	3	1	0	0	38		
09:00	15	1	0	1	0	17	78	9	13	23	0	123	20	0	2	0	0	0	22		
09:15	14	1	0	0	0	15	66	8	4	18	0	96	12	2	1	0	0	0	15		
09:30	11	0	1	0	0	12	70	7	5	16	0	98	6	0	1	0	0	0	7		
09:45	14	0	0	0	0	14	60	7	4	14	0	85	9	1	0	0	0	0	10		
H/TOT	54	2	1	1	0	58	274	31	26	71	0	402	47	3	4	0	0	0	54		
10:00	9	3	0	0	0	12	52	8	7	18	0	85	7	1	0	0	0	0	8		
10:15	18	1	1	0	0	20	75	9	5	11	0	100	5	1	0	0	0	0	6		
10:30	13	1	0	0	0	14	53	6	3	21	0	83	10	0	0	0	0	0	10		
10:45	16	2	1	0	0	19	51	8	4	14	2	79	7	1	0	1	0	0	9		
H/TOT	56	7	2	0	0	65	231	31	19	64	2	347	29	3	0	1	0	0	33		
11:00	19	0	0	0	1	20	58	7	11	18	1	95	6	0	0	1	0	0	7		
11:15	20	1	0	0	0	21	43	6	5	15	1	70	8	0	1	0	1	0	10		
11:30	24	1	0	0	0	25	63	16	5	22	0	106	10	0	1	0	0	0	11		
11:45	19	0	0	0	0	19	48	7	5	21	0	81	7	2	0	0	0	0	9		
H/TOT	82	2	0	0	1	85	212	36	26	76	2	352	31	2	2	1	1	1	37		
12:00	25	2	0	1	1	29	63	7	5	22	0	97	12	2	1	0	0	0	15		
12:15	20	2	0	1	0	23	61	10	10	14	0	95	3	1	0	2	0	0	6		
12:30	27	0	1	0	0	28	60	8	8	15	0	91	10	1	0	0	0	0	11		
12:45	21	0	0	0	0	21	55	6	6	17	1	85	14	1	2	1	0	0	18		
H/TOT	93	4	1	2	1	101	239	31	29	68	1	368	39	5	3	3	0	0	50		

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
13:00	28	1	0	0	0	29	47	5	3	20	0	75	10	0	0	0	0	10			
13:15	22	0	0	0	0	22	56	6	7	14	0	83	14	1	1	0	0	16			
13:30	20	0	2	0	0	22	49	7	11	16	0	83	7	1	1	0	0	9			
13:45	14	1	0	0	0	15	53	4	6	21	0	84	11	0	1	0	0	12			
H/TOT	84	2	2	0	0	88	205	22	27	71	0	325	42	2	3	0	0	47			
14:00	23	1	0	1	0	25	66	7	8	12	0	93	16	0	0	0	0	16			
14:15	24	1	1	0	0	26	45	4	5	15	0	69	10	2	0	0	0	12			
14:30	16	1	0	0	0	17	51	5	5	10	0	71	13	1	0	1	0	15			
14:45	15	3	0	0	0	18	63	11	4	19	0	97	15	2	0	0	0	17			
H/TOT	78	6	1	1	0	86	225	27	22	56	0	330	54	5	0	1	0	60			
15:00	20	0	0	0	1	21	75	5	2	23	0	105	10	1	1	0	0	12			
15:15	24	3	0	0	0	27	52	7	4	15	1	79	15	2	2	0	0	19			
15:30	28	2	0	0	0	30	72	6	10	12	0	100	6	1	0	0	0	7			
15:45	24	1	0	1	0	26	71	5	2	24	0	102	9	0	1	0	1	11			
H/TOT	96	6	0	1	1	104	270	23	18	74	1	386	40	4	4	0	1	49			
16:00	34	0	0	0	0	34	75	12	3	13	0	103	17	0	0	0	0	17			
16:15	18	4	0	0	0	22	76	8	5	16	0	105	23	1	0	0	0	24			
16:30	23	1	0	1	0	25	71	2	4	6	0	83	10	1	0	0	0	11			
16:45	34	0	0	0	0	34	85	10	4	6	0	105	12	0	0	0	0	12			
H/TOT	109	5	0	1	0	115	307	32	16	41	0	396	62	2	0	0	0	64			
17:00	22	0	0	0	0	22	92	5	5	7	0	109	11	0	0	1	0	12			
17:15	36	2	0	0	0	38	83	7	6	9	0	105	10	3	0	0	0	13			
17:30	32	1	1	0	0	34	91	13	6	3	0	113	18	0	1	0	0	19			
17:45	32	4	0	1	0	37	89	6	4	9	0	108	12	0	0	0	0	12			
H/TOT	122	7	1	1	0	131	355	31	21	28	0	435	51	3	1	1	0	56			
18:00	29	2	0	0	0	31	87	5	2	13	0	107	19	2	0	0	0	21			
18:15	30	0	0	0	0	30	75	2	6	7	0	90	14	2	1	0	0	17			
18:30	14	0	0	0	0	14	83	7	4	8	0	102	9	0	0	0	0	9			
18:45	20	0	0	1	0	21	81	6	4	7	0	98	10	2	0	0	0	12			
H/TOT	93	2	0	1	0	96	326	20	16	35	0	397	52	6	1	0	0	59			
P/TOT	939	49	8	10	3	1009	3329	358	279	706	6	4678	490	40	21	8	2	561			

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:15	2	1	0	0	0	3	0	1	0	0	0	1	1	0	0	0	0	1
07:30	4	0	2	0	0	6	0	0	0	0	0	0	3	0	0	0	0	3
07:45	8	0	0	1	0	9	1	0	0	0	0	1	2	1	1	2	0	6
H/TOT	15	1	2	1	0	19	1	1	0	0	0	2	6	1	1	2	0	10
08:00	3	1	0	0	0	4	4	1	0	0	1	6	4	0	0	0	0	4
08:15	5	0	1	1	0	7	2	0	0	0	0	2	2	0	1	1	0	4
08:30	7	0	1	0	0	8	6	0	1	0	0	8	4	0	2	1	0	7
08:45	19	0	0	0	0	19	11	0	0	0	0	11	3	0	1	0	0	4
H/TOT	34	1	2	1	0	38	23	1	1	1	1	27	13	0	4	2	0	19
09:00	14	1	0	0	0	15	3	0	0	0	0	3	2	0	1	3	0	6
09:15	11	0	0	0	0	11	1	1	1	0	0	3	0	0	1	2	0	3
09:30	17	1	0	2	0	20	3	0	0	0	0	3	2	0	0	0	0	2
09:45	18	0	0	1	0	19	1	1	0	0	0	4	1	0	1	1	0	3
H/TOT	60	2	0	3	0	65	10	2	1	0	0	13	5	0	3	6	0	14
10:00	12	1	1	1	0	15	0	0	0	0	0	0	0	0	2	1	0	3
10:15	9	2	0	1	0	12	1	0	0	0	0	1	4	0	0	1	0	5
10:30	15	0	1	0	0	16	5	0	0	0	0	5	5	0	2	0	0	7
10:45	14	1	0	1	0	16	2	1	1	0	0	4	1	0	0	1	0	2
H/TOT	50	4	2	3	0	59	8	1	1	0	0	10	10	0	4	3	0	17
11:00	11	1	0	0	0	12	4	1	1	0	0	6	1	1	0	1	0	3
11:15	15	1	0	0	0	16	3	0	2	0	1	6	1	1	0	0	0	2
11:30	18	0	0	2	0	20	3	0	1	0	0	4	2	0	1	0	0	3
11:45	19	1	0	0	0	20	5	0	1	0	0	6	5	1	0	0	0	6
H/TOT	63	3	0	2	0	68	15	1	5	0	1	22	9	3	1	1	0	14
12:00	21	1	1	1	0	24	2	0	0	0	0	2	0	0	0	3	0	3
12:15	16	1	0	1	0	18	6	1	0	0	0	7	1	0	0	1	0	2
12:30	10	0	1	0	0	11	4	0	0	0	0	4	2	0	1	0	0	3
12:45	11	0	0	0	0	11	4	0	0	0	0	4	1	1	0	0	0	2
H/TOT	58	2	2	2	0	64	16	1	0	0	0	17	4	1	1	4	0	10

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	13	0	1	0	0	14	4	0	0	2	0	6	3	0	0	0	0	3
13:15	15	1	0	0	0	16	2	0	0	0	0	2	0	0	0	1	0	1
13:30	16	1	0	0	0	17	6	0	1	0	0	7	2	0	1	0	0	3
13:45	16	0	0	1	0	17	7	0	0	0	0	7	0	0	0	2	0	2
H/TOT	60	2	1	1	0	64	19	0	1	2	0	22	5	0	1	3	0	9
14:00	17	1	0	0	0	18	7	0	0	0	0	7	6	1	0	0	0	7
14:15	14	1	0	0	0	15	5	0	0	0	0	5	0	0	0	0	1	1
14:30	7	1	0	1	0	9	5	0	0	0	0	5	3	0	0	1	0	4
14:45	7	0	0	0	0	7	3	0	1	0	0	4	0	0	1	0	0	1
H/TOT	45	3	0	1	0	49	20	0	1	0	0	21	9	1	1	1	1	13
15:00	11	1	0	0	0	12	3	0	0	0	0	3	3	0	1	0	0	4
15:15	22	0	0	0	0	22	5	0	0	0	0	6	4	0	0	0	0	4
15:30	14	0	1	0	0	15	2	0	1	0	0	3	2	1	0	1	0	4
15:45	23	1	0	0	0	24	3	1	0	0	0	10	4	0	1	0	0	5
H/TOT	70	2	1	0	0	73	19	2	1	0	0	22	13	1	2	1	0	17
16:00	16	0	1	0	0	17	4	0	0	0	0	4	3	0	0	0	0	3
16:15	15	2	1	0	0	18	7	1	0	0	0	8	4	0	1	2	0	7
16:30	13	0	0	0	0	13	5	1	0	0	0	6	1	0	0	0	0	1
16:45	17	0	0	0	0	17	3	2	0	0	0	5	2	1	0	0	0	3
H/TOT	61	2	2	0	0	65	19	4	0	0	0	23	10	1	1	2	0	14
17:00	8	1	0	0	0	9	9	0	0	0	0	9	4	0	0	0	0	4
17:15	10	2	0	1	0	13	7	0	0	0	0	7	3	0	0	0	0	3
17:30	12	2	0	0	0	14	7	1	1	0	0	9	2	0	0	1	0	3
17:45	14	0	1	0	0	15	8	0	0	0	0	8	2	0	1	0	0	3
H/TOT	44	5	1	1	0	51	31	1	1	0	0	33	11	0	1	1	0	13
18:00	14	1	0	0	0	15	11	0	0	1	0	12	4	0	1	0	0	5
18:15	13	1	0	1	0	15	5	0	0	0	0	5	1	0	0	0	0	1
18:30	14	2	1	0	0	17	6	1	0	0	0	7	1	0	0	1	0	2
18:45	8	1	0	0	0	9	6	1	0	0	0	7	0	1	0	0	0	1
H/TOT	49	5	1	1	0	56	28	2	0	1	0	31	6	1	1	1	0	9
P/TOT	609	32	14	16	0	671	209	16	12	4	2	243	101	9	21	27	1	159

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 7						MOVEMENT 8						MOVEMENT 9					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	1	0	0	0	0	1	41	1	1	18	0	61	1	0	0	0	0	1
07:15	4	0	1	2	0	7	50	6	5	23	0	84	2	0	0	0	0	2
07:30	11	0	0	0	0	11	69	7	8	31	0	115	4	1	0	1	0	6
07:45	5	0	0	0	0	5	53	13	6	12	0	84	8	0	0	0	1	9
H/TOT	21	0	1	2	0	24	213	27	20	84	0	344	15	1	0	1	1	18
08:00	4	0	0	1	0	5	53	10	10	20	0	93	7	1	0	0	0	8
08:15	3	0	0	1	0	4	83	8	5	17	0	113	12	1	1	0	0	14
08:30	3	0	2	0	0	5	64	0	7	9	0	82	31	4	2	0	0	37
08:45	4	0	1	0	0	5	115	12	4	10	1	142	56	2	1	1	0	60
H/TOT	14	0	3	2	0	19	315	30	26	58	1	430	106	8	4	1	0	119
09:00	6	2	0	0	0	8	78	4	4	13	0	99	18	0	1	1	1	21
09:15	6	0	0	0	0	6	73	1	3	9	0	97	15	3	0	0	0	18
09:30	4	1	1	1	0	7	69	8	6	14	0	97	23	0	1	0	0	24
09:45	6	0	0	0	0	6	79	9	10	20	0	118	15	1	0	1	0	17
H/TOT	22	3	1	1	0	27	299	33	23	56	0	411	71	4	2	2	1	80
10:00	6	0	1	2	1	10	66	9	8	17	0	100	12	1	0	0	0	13
10:15	2	0	1	1	0	4	60	6	10	17	0	93	7	3	0	0	0	10
10:30	4	0	1	0	0	5	67	6	8	13	0	94	11	0	1	0	1	13
10:45	6	0	0	2	0	8	57	5	9	17	0	88	12	1	0	0	0	13
H/TOT	18	0	3	5	1	27	250	26	35	64	0	375	42	5	1	0	1	49
11:00	7	1	1	3	0	12	46	8	5	11	0	70	12	2	1	0	0	15
11:15	4	2	1	0	0	7	53	9	5	14	0	81	9	1	0	0	0	10
11:30	7	1	3	2	0	13	57	7	2	17	0	83	10	2	2	0	1	15
11:45	6	1	0	0	0	7	48	4	8	15	1	76	17	0	1	1	0	19
H/TOT	24	5	5	5	0	39	204	28	20	57	1	310	48	5	4	1	1	59
12:00	6	0	0	2	0	8	49	9	10	21	1	90	15	1	0	0	0	16
12:15	4	2	1	1	0	8	48	7	9	15	1	80	10	0	0	0	0	10
12:30	2	1	0	1	0	4	44	4	2	23	0	73	15	2	0	0	0	17
12:45	4	0	0	2	0	6	52	9	10	10	0	81	25	1	0	0	0	26
H/TOT	16	3	1	6	0	26	193	29	31	69	2	324	65	4	0	0	0	69

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 7						MOVEMENT 8						MOVEMENT 9					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	8	0	1	1	0	10	54	3	7	23	0	87	20	0	0	0	0	20
13:15	8	1	0	1	0	10	53	6	10	19	0	88	19	0	1	0	0	20
13:30	4	0	1	3	0	8	49	8	9	17	0	83	12	0	0	0	1	13
13:45	4	0	0	2	0	6	65	7	4	15	0	91	39	2	0	0	0	41
H/TOT	24	1	2	7	0	34	221	24	30	74	0	349	90	2	1	0	1	94
14:00	5	1	0	1	0	7	59	8	4	13	1	85	15	0	0	1	0	16
14:15	6	0	1	0	0	7	77	5	8	18	1	109	16	1	0	0	0	17
14:30	4	1	1	3	1	10	86	15	5	22	0	118	22	0	0	0	0	22
14:45	6	0	1	0	1	8	60	4	12	10	2	88	10	1	0	0	0	11
H/TOT	21	2	3	4	2	32	282	32	29	53	4	400	63	2	0	1	0	66
15:00	8	0	0	1	0	9	65	6	9	9	0	89	17	1	1	0	0	19
15:15	6	0	0	1	0	7	64	3	3	12	0	82	16	0	2	0	1	19
15:30	7	2	1	1	0	11	59	4	5	13	0	81	25	1	1	0	0	27
15:45	10	0	1	3	1	15	62	8	6	15	1	92	11	0	0	0	0	11
H/TOT	31	2	2	6	1	42	250	21	23	49	1	344	69	2	4	0	1	76
16:00	5	1	0	0	0	6	64	6	9	12	1	92	19	0	0	0	0	19
16:15	8	0	1	1	0	10	63	6	6	10	0	85	20	1	0	0	1	22
16:30	8	1	0	1	0	10	81	4	6	9	0	100	19	2	1	0	1	23
16:45	11	1	0	0	0	12	73	4	4	7	0	88	15	0	0	0	0	15
H/TOT	32	3	1	2	0	38	281	20	25	38	1	365	73	3	1	0	2	79
17:00	5	1	0	0	0	6	89	8	4	18	1	120	22	2	0	0	0	24
17:15	13	0	0	0	0	13	65	5	2	12	0	84	26	2	0	0	1	29
17:30	8	1	0	1	0	10	66	6	6	5	0	83	20	3	1	0	1	25
17:45	2	1	0	0	0	3	64	7	4	9	0	84	39	0	1	0	0	40
H/TOT	28	3	0	1	0	32	284	26	16	44	1	371	107	7	2	0	2	118
18:00	18	0	0	0	0	18	87	10	5	11	0	113	35	3	0	0	0	38
18:15	11	0	1	2	0	14	65	4	3	5	0	77	23	1	0	0	0	24
18:30	4	1	0	1	0	6	104	7	4	18	0	133	35	0	0	0	1	36
18:45	12	0	0	1	0	13	82	7	2	11	1	103	32	0	0	0	0	32
H/TOT	45	1	1	4	0	51	338	28	14	45	1	426	125	4	0	0	1	130
P/TOT	296	23	23	45	4	391	3130	324	292	691	12	4449	874	47	19	6	11	957

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	4	0	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	1
07:15	11	1	1	0	0	13	1	0	0	0	0	1	4	1	0	0	0	5
07:30	22	1	0	0	0	23	7	1	0	0	0	8	7	0	0	0	0	7
07:45	6	0	0	0	0	6	5	0	0	0	0	5	10	1	0	0	0	11
H/TOT	43	2	1	0	0	46	13	1	0	0	0	14	22	2	0	0	0	24
08:00	11	1	0	0	0	12	4	0	0	0	0	4	2	0	0	0	0	2
08:15	15	1	0	0	1	17	4	1	0	0	0	5	10	2	0	0	0	12
08:30	37	2	1	0	0	40	5	0	0	0	0	5	12	1	0	0	0	13
08:45	36	3	1	0	0	40	10	0	0	0	0	10	19	0	0	0	0	19
H/TOT	99	7	2	0	1	109	23	1	0	0	0	24	43	3	0	0	0	46
09:00	35	2	0	0	0	37	11	0	0	0	0	11	16	1	2	1	0	20
09:15	16	4	0	0	1	21	5	3	0	0	0	7	12	1	1	0	0	14
09:30	17	0	0	0	0	17	7	1	0	0	0	8	13	4	0	0	0	17
09:45	12	2	0	0	0	14	3	0	0	0	0	3	12	3	0	1	0	16
H/TOT	80	8	0	0	1	89	26	3	0	0	0	29	53	9	3	2	0	67
10:00	21	2	0	0	0	23	3	0	0	0	0	3	11	0	0	0	0	11
10:15	13	1	0	0	0	14	3	1	0	0	0	4	10	2	0	0	0	12
10:30	14	2	0	0	0	16	6	0	0	0	0	6	14	1	0	0	0	15
10:45	15	1	1	1	0	18	6	0	0	0	0	6	13	2	0	0	0	15
H/TOT	63	6	1	1	0	71	18	1	0	0	0	19	48	5	0	0	0	53
11:00	3	1	0	0	1	5	5	0	1	0	0	6	10	4	1	0	0	15
11:15	12	1	1	0	0	14	3	0	0	0	0	3	13	1	0	0	0	14
11:30	10	3	1	0	0	14	6	0	1	0	1	8	14	0	0	0	0	14
11:45	15	2	0	0	0	17	5	2	0	1	0	8	15	2	1	1	0	19
H/TOT	40	7	2	0	1	50	19	2	2	1	1	25	52	7	2	1	0	62
12:00	20	2	0	0	1	23	10	1	0	0	0	11	14	1	0	0	0	15
12:15	17	1	1	1	0	20	5	0	0	0	0	5	10	1	1	0	0	12
12:30	16	0	1	0	0	17	9	1	1	2	0	13	17	1	0	0	0	18
12:45	20	1	0	0	0	21	4	1	0	0	0	5	15	1	0	0	0	16
H/TOT	73	4	2	1	1	81	28	3	1	2	0	34	56	4	1	0	0	61

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 01

DATE: 1st March 2005

LOCATION: N8 Cahir Road/N78 Mallow Road/N8 Cork Road

DAY: Tuesday

TIME	MOVEMENT 10						TOT	MOVEMENT 11						TOT	MOVEMENT 12						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
13:00	21	2	0	0	0	23	10	0	1	0	0	11	15	1	0	0	0	16			
13:15	15	3	0	0	0	18	8	0	0	0	0	8	10	2	0	1	0	13			
13:30	17	0	1	0	0	18	6	0	0	0	0	6	14	0	0	0	0	14			
13:45	16	2	0	0	0	18	8	0	0	0	0	8	12	0	0	0	0	12			
H/TOT	69	7	1	0	0	77	32	0	1	0	0	33	51	3	0	1	0	55			
14:00	21	1	0	0	0	22	4	1	0	1	0	6	18	0	0	0	0	18			
14:15	11	1	1	0	0	13	6	1	1	0	0	8	17	0	0	0	0	17			
14:30	11	0	0	0	1	12	6	1	0	0	0	7	17	1	1	1	0	20			
14:45	27	2	0	0	0	29	16	2	0	0	0	18	15	0	0	0	0	15			
H/TOT	70	4	1	0	1	76	32	5	1	1	0	39	67	1	1	1	0	70			
15:00	21	0	0	0	0	21	5	1	1	0	0	7	17	0	0	0	0	17			
15:15	24	1	0	0	0	25	3	1	0	0	0	4	9	0	0	1	0	10			
15:30	22	0	0	0	1	23	10	1	1	0	0	12	20	0	0	0	0	20			
15:45	31	2	1	0	0	34	12	2	0	0	0	14	15	2	1	0	0	18			
H/TOT	98	3	1	0	1	103	30	5	2	0	0	37	61	2	1	1	0	65			
16:00	19	1	0	0	0	20	11	0	0	0	0	11	13	1	0	0	0	14			
16:15	11	1	0	0	0	12	7	1	2	0	0	10	15	1	0	1	0	17			
16:30	17	1	0	0	1	19	2	3	0	0	0	5	12	1	0	0	0	13			
16:45	16	2	0	0	1	19	7	0	0	0	0	7	10	0	0	1	0	11			
H/TOT	63	5	0	0	2	70	27	4	2	0	0	33	50	3	0	2	0	55			
17:00	26	1	1	0	1	29	7	0	0	0	0	7	18	0	0	0	0	18			
17:15	21	0	2	1	0	24	3	3	0	0	0	6	8	0	0	0	0	8			
17:30	20	1	0	0	0	21	9	2	0	0	0	11	13	2	0	0	0	15			
17:45	26	1	0	0	0	27	3	2	0	0	0	5	19	0	0	0	0	19			
H/TOT	93	3	3	1	1	101	22	7	0	0	0	29	58	2	0	0	0	60			
18:00	31	1	0	0	0	32	10	2	1	1	0	14	16	0	0	0	0	16			
18:15	28	0	0	0	0	28	9	0	0	0	0	9	25	0	0	0	0	25			
18:30	29	1	0	0	0	30	8	2	0	0	0	10	10	1	0	0	0	11			
18:45	23	0	0	0	0	23	8	0	1	0	1	10	18	0	0	0	0	18			
H/TOT	111	2	0	0	0	113	35	4	2	1	1	43	69	1	0	0	0	70			
P/TOT	902	58	14	3	9	986	305	36	11	5	2	359	630	42	8	8	0	688			

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
08:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45	0	0	1	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	1	1	0	1	0	3	2	0	0	0	0	2
09:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
09:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1
H/TOT	0	0	0	0	0	0	0	1	0	0	1	2	1	0	1	0	0	2
10:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	2
11:00	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
11:15	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
11:30	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	1
11:45	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	4	1	0	0	0	5	1	0	0	0	0	1
12:00	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	1
12:15	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0
12:30	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	5	0	0	0	0	5	1	0	0	0	0	1

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
13:15	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1
13:30	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
13:45	0	0	0	0	0	0	3	0	1	0	0	4	4	0	0	0	0	4
H/TOT	1	0	0	0	0	1	7	0	1	0	0	8	5	0	0	0	0	5
14:00	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
14:15	0	0	0	0	0	0	5	0	0	0	0	5	1	0	0	0	0	1
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	10	0	0	0	0	10	1	0	0	0	0	1
15:00	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
15:15	0	0	0	0	0	0	1	0	0	0	0	1	4	0	0	0	0	4
15:30	1	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0
15:45	1	0	0	0	0	1	0	0	0	0	0	2	0	0	1	0	0	1
H/TOT	2	0	0	0	0	2	8	0	0	0	0	8	4	0	1	0	0	5
16:00	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	1
16:15	0	0	0	0	0	0	3	1	0	0	0	4	2	0	0	0	0	2
16:30	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	2
16:45	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	9	1	0	0	0	10	5	0	0	0	0	5
17:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	1
17:15	0	0	0	0	0	0	4	0	0	0	0	4	1	0	0	0	0	1
17:30	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
17:45	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	8	0	0	0	0	8	1	0	0	0	1	2
18:00	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
18:15	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
18:30	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0
18:45	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
H/TOT	0	0	0	0	0	0	7	0	0	0	0	7	3	0	0	0	0	3
P/TOT	4	0	1	0	0	5	61	3	1	2	0	67	28	0	2	0	1	31

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:00	0	1	0	0	0	1	2	1	0	0	0	3	1	1	1	0	0	3
08:15	1	1	0	0	0	2	2	0	0	0	0	2	1	0	0	0	0	1
08:30	1	0	0	0	0	1	3	1	0	0	0	4	0	0	0	0	0	0
08:45	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0
H/TOT	2	2	0	0	0	4	11	2	0	0	0	13	2	1	1	0	0	4
09:00	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0
09:15	2	0	0	0	0	2	2	0	0	0	0	3	0	0	0	0	0	0
09:30	2	0	0	0	0	2	2	0	1	0	0	3	0	0	0	0	0	0
09:45	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0
H/TOT	4	0	0	0	0	4	11	1	1	0	0	13	0	0	0	0	0	0
10:00	1	0	0	0	0	1	2	0	0	0	0	2	1	0	0	0	0	1
10:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
10:30	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
10:45	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1
H/TOT	3	1	0	0	0	4	4	0	0	0	0	4	1	1	0	0	0	2
11:00	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0
11:15	1	0	0	0	1	2	2	1	0	0	0	3	0	0	0	0	0	0
11:30	0	0	0	0	0	0	2	1	0	0	0	3	2	0	0	0	0	2
11:45	1	1	0	0	0	2	0	1	0	0	0	1	1	0	0	0	0	1
H/TOT	2	1	0	0	1	4	10	3	0	0	0	13	3	0	0	0	0	3
12:00	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
12:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
12:30	1	0	0	0	0	1	6	0	0	0	0	6	2	0	0	0	0	2
12:45	0	0	0	0	0	0	3	1	1	0	0	5	1	0	0	0	0	1
H/TOT	1	0	0	0	0	1	13	1	1	0	0	15	3	0	0	0	0	3

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
13:15	2	0	0	0	0	2	2	0	0	0	0	2	0	0	0	1	0	1
13:30	1	0	0	0	0	1	2	0	0	0	0	2	2	0	0	0	0	2
13:45	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
H/TOT	3	0	0	0	0	3	6	0	0	0	0	6	3	0	0	1	0	4
14:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
14:15	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0
14:30	1	0	0	0	0	1	3	0	1	0	0	4	0	1	0	0	0	1
14:45	1	0	0	0	0	1	4	1	0	0	0	5	0	0	0	0	0	0
H/TOT	3	0	0	0	0	3	10	1	1	0	0	12	0	1	0	0	0	1
15:00	0	0	0	0	0	0	2	0	0	0	1	3	1	0	0	0	0	1
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	13	0	0	0	1	14	1	0	0	0	0	1
16:00	2	0	0	0	0	2	3	0	0	0	0	3	0	0	0	0	0	0
16:15	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1
16:30	3	0	0	0	0	3	6	1	0	1	0	8	1	0	0	0	0	1
16:45	0	1	0	0	0	1	9	3	0	0	0	12	2	1	0	0	0	3
H/TOT	6	1	0	0	0	7	19	4	0	1	0	24	4	1	0	0	0	5
17:00	1	0	0	0	0	1	6	2	0	0	1	9	0	0	0	0	0	0
17:15	0	0	0	0	0	0	6	0	0	0	0	6	2	0	0	0	0	2
17:30	2	0	0	0	1	3	7	0	0	0	0	7	2	0	0	0	0	2
17:45	2	0	0	0	0	2	6	0	0	0	0	6	0	0	0	0	0	0
H/TOT	5	0	0	0	1	6	25	2	0	0	1	28	4	0	0	0	0	4
18:00	1	0	0	0	0	1	10	1	0	0	0	11	0	0	0	0	0	0
18:15	1	0	0	0	0	1	11	0	0	0	0	11	1	0	0	0	0	1
18:30	1	0	0	0	0	1	10	2	0	0	0	12	1	1	0	0	0	2
18:45	3	0	0	0	0	3	8	0	0	0	0	8	2	0	0	0	0	2
H/TOT	6	0	0	0	0	6	39	3	0	0	0	42	4	1	0	0	0	5
P/TOT	35	5	0	0	2	42	161	17	3	1	2	184	25	5	1	1	1	33

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 7						MOVEMENT 8						MOVEMENT 9					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
07:30	0	1	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0
07:45	2	0	0	0	0	2	3	0	0	0	0	3	0	0	0	0	0	0
H/TOT	2	1	0	0	0	3	6	0	0	0	0	6	0	0	0	0	0	0
08:00	3	0	0	0	1	4	0	0	0	0	0	0	0	1	0	0	0	1
08:15	1	0	0	0	0	1	2	0	0	0	0	2	0	0	1	0	0	1
08:30	3	0	0	0	0	3	2	0	0	0	0	2	1	1	0	0	0	2
08:45	0	0	0	0	0	0	2	0	0	0	0	2	3	0	0	0	0	3
H/TOT	7	0	0	0	1	8	6	0	0	0	0	6	4	2	1	0	0	7
09:00	2	0	0	0	0	2	2	0	0	0	0	2	0	0	0	0	0	0
09:15	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0
09:30	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
H/TOT	3	0	0	0	0	3	6	0	0	0	0	6	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	1	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
11:30	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
11:45	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0
12:00	2	0	0	0	0	2	3	0	1	0	0	4	1	0	0	0	0	1
12:15	2	0	0	0	0	2	2	0	0	0	0	2	0	0	0	0	0	0
12:30	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1
12:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
H/TOT	5	0	0	0	0	5	5	0	1	0	0	6	3	0	0	0	0	3

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 7						MOVEMENT 8						MOVEMENT 9					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	0	0	0	0	0	0	3	0	0	0	0	3	1	0	0	0	0	1
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
13:45	0	0	0	0	0	0	7	0	0	1	0	8	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	11	0	0	1	0	12	1	0	0	0	0	1
14:00	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	1
14:15	0	0	0	0	0	0	4	0	1	0	0	5	0	0	0	0	0	0
14:30	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1
14:45	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
H/TOT	0	2	0	0	0	2	6	0	2	0	0	8	2	0	0	0	0	2
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	1	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0
H/TOT	2	0	0	0	0	2	3	1	0	0	0	4	1	0	0	0	0	1
16:00	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0
16:15	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	2
16:30	0	0	0	0	0	0	2	0	0	0	0	2	1	0	1	0	1	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
H/TOT	0	0	0	0	0	0	7	0	0	0	0	7	3	0	1	0	2	6
17:00	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2
17:15	0	0	0	0	0	0	3	0	0	0	0	3	1	0	0	0	0	1
17:30	2	0	0	0	0	2	2	0	0	0	0	2	0	0	0	0	0	0
17:45	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0
H/TOT	4	0	0	0	0	4	6	0	0	0	0	6	2	0	0	0	1	3
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0
18:30	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
18:45	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	1
H/TOT	2	0	0	0	0	2	4	0	0	0	0	4	0	0	0	1	0	1
P/TOT	26	3	0	0	1	30	68	1	3	1	0	73	16	2	2	1	3	24

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
07:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
07:30	0	0	0	0	0	0	3	2	0	0	0	5	0	0	0	0	0	0
07:45	1	0	0	0	0	1	11	0	0	0	0	11	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	17	2	0	0	0	19	0	0	0	0	0	0
08:00	0	0	0	0	0	0	8	0	1	0	0	9	0	0	0	0	0	0
08:15	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0
08:30	0	0	0	0	0	0	9	0	0	0	0	9	0	0	0	0	0	0
08:45	1	0	0	0	0	1	10	2	0	0	0	12	1	0	0	0	0	1
H/TOT	1	0	0	0	0	1	33	2	1	0	0	36	1	0	0	0	0	1
09:00	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0
09:15	0	0	0	0	0	0	3	0	0	0	0	3	1	0	0	0	0	1
09:30	0	0	0	0	0	0	6	0	0	1	0	7	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	15	0	0	1	0	16	1	0	0	0	0	1
10:00	1	0	0	0	0	1	6	0	0	0	0	6	0	0	0	0	0	0
10:15	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
10:30	1	0	0	0	0	1	7	0	0	0	0	7	1	0	0	0	0	1
10:45	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0
H/TOT	2	0	0	0	0	2	20	0	0	0	0	20	1	0	0	0	0	1
11:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
11:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
11:30	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0	0
11:45	0	0	0	0	0	0	3	0	0	0	1	4	1	0	0	0	0	1
H/TOT	0	0	0	0	0	0	9	0	0	2	1	12	1	0	0	0	0	1
12:00	1	0	0	0	0	1	4	0	0	0	1	5	0	0	0	0	0	0
12:15	0	1	0	0	0	1	1	0	0	1	1	3	0	0	0	0	0	0
12:30	0	0	0	0	0	0	4	1	0	0	0	5	0	0	0	0	0	0
12:45	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0
H/TOT	1	1	0	0	0	2	15	1	0	1	2	19	0	0	0	0	0	0

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 02

DATE: 1st March 2005

LOCATION: Unc to Mitchelstown/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0
13:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
13:30	2	0	0	0	0	2	4	0	0	0	0	4	0	0	0	0	0	0
13:45	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
H/TOT	2	0	0	0	0	2	11	0	0	0	0	11	0	0	0	0	0	0
14:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
14:15	0	0	0	0	0	0	3	0	0	0	0	3	0	0	1	0	0	1
14:30	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	5	0	0	0	0	5	1	0	1	0	0	2
15:00	1	0	0	0	1	2	1	0	0	1	0	2	0	0	0	0	0	0
15:15	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1
15:30	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0
15:45	2	0	0	0	0	2	0	0	0	0	0	2	1	0	0	0	0	1
H/TOT	3	0	0	0	1	4	5	1	0	1	0	7	2	0	0	0	0	2
16:00	0	1	0	0	0	1	3	0	0	0	0	3	1	0	1	0	0	2
16:15	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0
16:30	0	0	0	0	0	0	3	2	0	0	0	5	0	0	0	0	0	0
16:45	1	0	0	0	0	1	3	1	0	0	0	4	0	0	0	0	0	0
H/TOT	1	1	0	0	0	2	11	3	0	0	0	14	1	0	1	0	0	2
17:00	1	0	0	0	0	1	3	0	0	0	0	3	0	0	0	0	0	0
17:15	1	0	0	0	1	2	3	1	0	0	0	4	0	0	0	0	0	0
17:30	2	0	0	0	0	2	3	0	0	0	0	3	0	0	0	0	0	0
17:45	1	0	0	0	0	1	5	0	0	0	0	5	0	0	0	0	0	0
H/TOT	5	0	0	0	1	6	14	1	0	0	0	15	0	0	0	0	0	0
18:00	0	0	0	0	0	0	4	1	0	0	0	5	0	0	0	0	0	0
18:15	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0
18:30	1	0	0	0	0	1	4	0	0	0	0	4	1	0	0	0	0	1
18:45	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
H/TOT	1	0	0	0	0	1	13	1	0	0	0	14	1	0	0	0	0	1
P/TOT	17	2	0	0	2	21	168	11	1	5	3	188	9	0	2	0	0	11

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 03

DATE: 1st March 2005

LOCATION: Unc to Kilworth/Unc to Site '02

DAY: Tuesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00	4	0	1	0	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	1	
08:15	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30	3	1	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
08:45	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	12	1	1	0	0	14	1	0	0	0	0	1	2	0	0	0	0	0	0	2	
09:00	2	0	0	0	0	2	0	0	0	0	0	0	2	1	0	0	0	0	0	3	
09:15	2	1	0	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	3	
09:30	3	0	1	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
09:45	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	9	1	1	0	0	11	1	0	0	0	0	1	5	1	0	0	0	0	0	6	
10:00	3	0	0	0	0	3	0	0	0	0	0	0	2	0	1	0	0	0	0	3	
10:15	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	2	1	0	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
H/TOT	9	2	0	0	0	11	0	0	0	0	0	0	4	0	1	0	0	0	0	5	
11:00	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	3	1	0	0	1	5	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
11:30	3	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	3	1	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
H/TOT	15	3	0	0	1	19	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
12:00	2	0	0	0	1	3	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
12:15	2	0	0	0	0	2	1	0	0	0	0	1	0	0	0	1	0	0	0	1	
12:30	6	1	0	0	0	7	2	0	0	0	0	2	2	0	0	0	0	0	0	2	
12:45	2	1	0	0	0	3	1	0	0	0	0	1	0	0	0	1	0	0	0	1	
H/TOT	12	2	0	0	1	15	4	0	0	0	0	4	4	0	0	2	0	0	0	6	

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 03

DATE: 1st March 2005

LOCATION: Unc to Kilworth/Unc to Site '02

DAY: Tuesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
13:00	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:15	3	0	0	1	0	4	2	0	0	0	0	2	1	0	0	0	0	0	0	1	
13:30	4	1	0	0	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
13:45	1	0	0	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	1	
H/TOT	10	2	0	1	0	13	4	0	0	0	0	4	1	0	1	0	0	0	0	2	
14:00	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
14:15	2	0	0	0	0	2	1	0	0	0	0	1	1	0	0	0	0	0	0	1	
14:30	5	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:45	2	1	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
H/TOT	10	2	0	0	0	12	2	0	0	0	0	2	2	0	0	0	0	0	0	2	
15:00	2	1	0	0	0	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
15:15	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:30	3	0	0	0	0	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
15:45	6	0	0	0	0	6	1	0	0	0	0	1	1	0	0	0	0	0	0	1	
H/TOT	12	1	0	0	0	13	3	0	0	0	0	3	1	0	0	0	0	0	0	1	
16:00	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	6	1	0	1	0	8	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
16:45	9	3	0	0	1	13	0	1	0	0	0	1	0	1	0	0	0	0	0	1	
H/TOT	24	4	0	1	1	30	0	1	0	0	0	1	1	1	0	0	0	0	0	2	
17:00	10	2	0	0	0	12	2	0	0	0	0	2	0	0	0	0	0	0	0	0	
17:15	13	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30	10	1	0	0	1	12	4	0	0	0	0	4	3	0	0	0	0	0	0	3	
17:45	9	0	0	0	0	9	2	0	0	0	0	2	0	0	0	0	0	0	0	0	
H/TOT	42	3	0	0	1	46	8	0	0	0	0	8	3	0	0	0	0	0	0	3	
18:00	9	3	0	0	0	12	4	0	0	0	0	4	0	0	0	0	0	0	0	0	
18:15	11	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:30	11	3	0	0	0	14	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
18:45	12	1	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	43	7	0	0	0	50	5	0	0	0	0	5	0	0	0	0	0	0	0	0	
P/TOT	200	28	2	2	4	236	28	1	0	0	0	29	25	2	2	2	0	0	0	31	

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 03

DATE: 1st March 2005

LOCATION: Unc to Kilworth/Unc to Site '02

DAY: Tuesday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
07:45	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	4
08:00	0	2	0	0	0	2	2	0	0	0	0	0	12	0	1	0	1	0	0	0	14
08:15	1	1	0	0	0	2	2	1	0	0	0	0	6	0	0	0	0	0	0	0	6
08:30	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
08:45	0	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	0	0	0	14
H/TOT	1	3	0	0	0	4	4	1	0	0	0	1	39	2	1	0	1	0	0	0	43
09:00	0	0	0	0	0	0	0	1	0	0	0	0	8	2	0	0	0	0	0	0	10
09:15	1	0	0	0	0	1	1	0	0	0	0	0	5	0	0	0	0	0	0	0	5
09:30	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	4
09:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3
H/TOT	1	0	0	0	0	1	1	1	0	0	1	0	19	2	1	0	0	0	0	0	22
10:00	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	3
10:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
10:30	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
10:45	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	5
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	16	1	0	0	0	0	0	0	17
11:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
11:15	1	0	0	0	0	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	3
11:30	0	0	0	0	0	0	0	0	0	1	0	1	5	0	0	0	0	0	0	0	5
11:45	1	0	0	0	0	1	1	1	0	0	1	0	2	0	0	0	0	0	0	0	2
H/TOT	2	0	0	0	0	2	2	1	0	0	2	0	14	0	0	0	0	0	0	0	14
12:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	5
12:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	1	0	0	0	6
12:30	1	0	0	0	0	1	1	0	0	0	0	0	3	1	0	0	0	1	0	0	5
12:45	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
H/TOT	1	0	0	0	0	1	1	0	0	0	0	0	17	1	0	1	3	0	0	0	22

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

MARCH 2005
ATH/05/034

SITE: 03

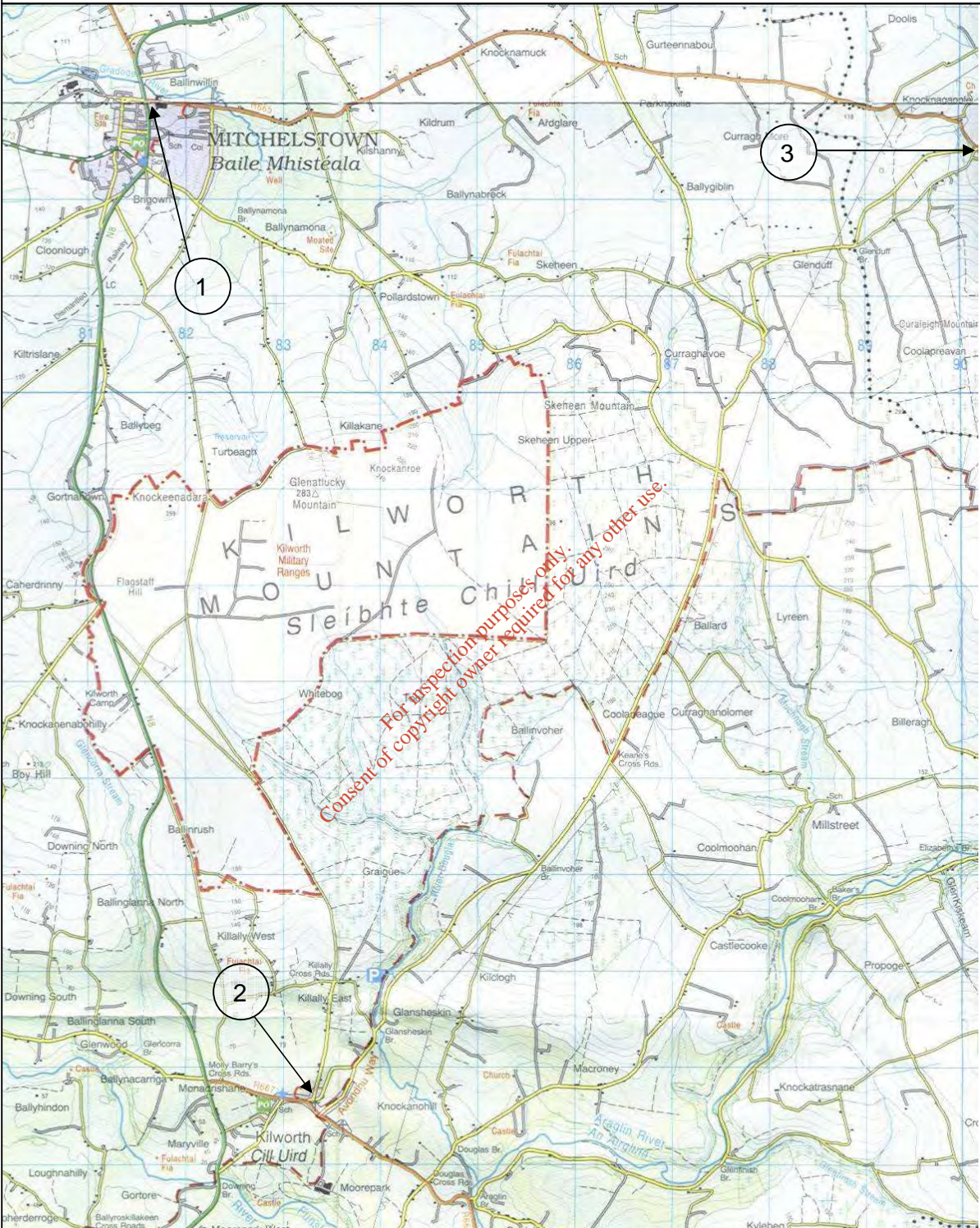
DATE: 1st March 2005


LOCATION: Unc to Kilworth/Unc to Site '02

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	0	0	0	0	0	0	1	0	0	0	0	1	6	0	0	0	0	6
13:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
13:30	1	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	4
13:45	0	0	0	0	0	0	1	0	0	0	0	1	5	0	0	0	0	5
H/TOT	1	0	0	0	0	1	2	0	0	0	0	2	18	0	0	0	0	18
14:00	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
14:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
14:30	0	0	0	0	0	0	3	0	0	0	0	3	2	1	0	0	0	3
14:45	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	2
H/TOT	1	0	0	0	0	1	3	0	0	0	0	3	9	2	0	0	0	11
15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
15:15	0	0	0	0	0	0	1	0	0	0	0	1	6	0	0	1	0	7
15:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
H/TOT	0	0	0	0	0	0	1	0	0	0	0	1	8	1	1	1	0	11
16:00	1	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	3
16:15	1	0	0	0	0	1	1	0	0	0	0	1	4	0	0	0	0	4
16:30	1	0	0	0	0	1	1	0	0	0	0	1	2	1	0	0	0	3
16:45	1	0	0	0	0	1	0	0	0	0	0	0	5	2	0	0	0	7
H/TOT	4	0	0	0	0	4	2	0	0	0	0	2	14	3	0	0	0	17
17:00	1	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	1	4
17:15	1	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
17:45	1	0	0	0	0	1	1	0	0	0	0	1	9	0	0	0	0	9
H/TOT	3	0	0	0	0	3	1	0	0	0	0	1	17	0	0	0	1	18
18:00	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6
18:15	1	0	0	0	0	1	1	0	0	0	0	1	5	0	0	0	0	5
18:30	1	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0	0	5
18:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
H/TOT	2	0	0	0	0	2	1	0	0	0	0	1	18	0	0	0	0	18
P/TOT	16	3	0	0	0	19	15	0	0	3	0	18	193	12	3	2	5	215

Site Locations

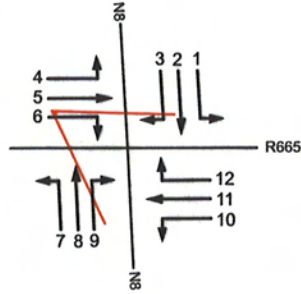


	Job number: ATH/05/056	Job date: 5 th April 2005	Drawing No: ATH/05/056-1
	Client: T.W.	Job day: Tuesday	Author: ITK

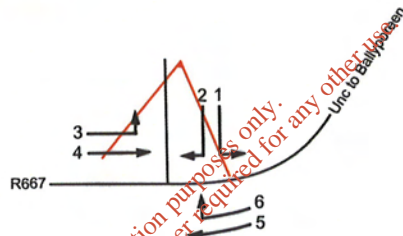


Movement Numbers & Directions

SITE 1

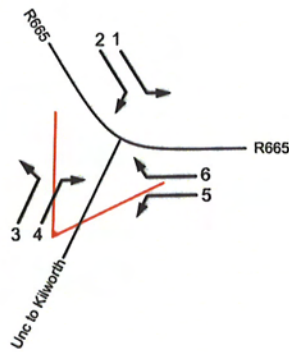




SITE 2



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SITE 3



	Job number: ATH/05/056	Job date: 5 th April 2005	Drawing No: ATH/05/056-2	
	Client: T.W.	Job day: Tuesday	Author: ITK	

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 1						TOT	MOVEMENT 2						TOT	MOVEMENT 3						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
07:00	1	0	1	0	0	2	75	21	5	15	0	116	12	0	0	4	0	16			
07:15	1	0	0	0	0	1	78	24	1	15	0	118	9	3	3	1	0	16			
07:30	5	0	0	0	0	5	67	21	6	14	0	108	14	3	0	2	0	19			
07:45	12	1	0	1	0	14	81	18	10	14	0	123	24	5	1	3	0	33			
H/TOT	19	1	1	1	0	22	301	84	22	58	0	465	59	11	4	10	0	84			
08:00	11	3	0	0	0	14	67	26	5	18	0	116	43	9	3	4	0	59			
08:15	13	5	1	0	0	19	91	15	13	21	0	140	29	5	1	4	0	39			
08:30	22	1	0	1	0	24	71	9	9	10	0	99	16	5	5	3	0	29			
08:45	21	3	0	0	0	24	68	14	7	16	1	106	5	1	2	1	0	9			
H/TOT	67	12	1	1	0	81	297	64	34	65	1	461	93	20	11	12	0	136			
09:00	13	1	2	0	0	16	68	13	6	10	0	97	12	5	0	3	0	20			
09:15	7	1	1	3	0	12	68	7	4	14	0	93	25	1	0	3	1	30			
09:30	8	2	0	0	0	10	100	19	6	13	0	138	15	3	0	4	1	23			
09:45	5	0	0	3	0	8	61	6	11	15	0	93	11	0	1	1	0	13			
H/TOT	33	4	3	6	0	46	297	45	27	52	0	421	63	9	1	11	2	86			
10:00	17	2	1	1	0	21	87	20	7	15	0	129	15	2	1	3	0	21			
10:15	8	0	2	0	0	10	61	17	5	14	0	97	15	1	1	3	0	20			
10:30	5	5	0	1	0	11	62	15	8	19	0	104	9	5	2	2	0	18			
10:45	11	0	0	0	0	11	77	11	6	13	0	107	12	4	0	4	2	22			
H/TOT	41	7	3	2	0	53	287	63	26	61	0	437	51	12	4	12	2	81			
11:00	9	0	0	1	0	10	59	14	4	21	0	98	6	1	0	3	1	11			
11:15	3	2	2	0	0	7	58	8	5	10	0	81	5	2	1	0	0	8			
11:30	3	2	1	0	0	6	56	9	9	13	0	87	19	4	2	4	0	29			
11:45	7	1	0	1	0	9	67	13	7	8	0	95	10	2	0	3	0	15			
H/TOT	22	5	3	2	0	32	240	44	25	52	0	361	40	9	3	10	1	63			
12:00	7	0	1	0	0	8	63	12	10	15	1	101	12	2	2	4	0	20			
12:15	7	0	0	1	0	8	52	6	9	18	1	86	15	1	3	3	0	22			
12:30	8	1	0	0	0	9	68	16	3	18	1	106	10	3	0	0	1	14			
12:45	5	1	0	1	0	7	61	9	12	8	0	90	8	2	1	1	0	12			
H/TOT	27	2	1	2	0	32	244	43	34	59	3	383	45	8	6	8	1	68			

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	5	0	0	0	0	5	78	10	8	12	1	109	14	0	0	5	0	19
13:15	9	1	2	0	0	12	66	5	8	7	1	87	9	1	0	6	0	16
13:30	8	0	1	1	0	10	70	17	4	9	1	101	9	1	1	4	0	15
13:45	7	1	0	0	0	8	48	7	9	14	0	78	5	0	1	0	1	7
H/TOT	29	2	3	1	0	35	262	39	29	42	3	375	37	2	2	15	1	57
14:00	15	0	0	1	0	16	58	10	10	15	0	93	20	1	0	1	0	22
14:15	4	0	0	1	0	5	72	5	5	11	0	93	8	1	1	1	1	12
14:30	7	0	0	0	0	7	70	7	6	4	0	97	15	3	0	4	2	24
14:45	12	1	0	1	0	14	67	12	9	4	0	102	16	3	1	1	0	21
H/TOT	38	1	0	3	0	42	267	34	30	54	0	385	59	8	2	7	3	79
15:00	8	0	0	0	0	8	62	5	8	22	0	97	16	1	0	3	0	20
15:15	2	0	0	1	0	3	72	1	7	13	0	106	5	1	0	1	1	8
15:30	7	1	2	0	0	10	64	12	6	8	0	90	9	2	3	5	0	19
15:45	7	0	1	0	0	8	72	10	9	11	0	102	13	1	1	2	0	17
H/TOT	24	1	3	1	0	29	270	41	30	54	0	395	43	5	4	11	1	64
16:00	5	0	0	2	0	7	68	9	6	10	0	93	41	3	0	0	1	45
16:15	6	2	0	0	0	8	78	11	6	7	0	102	10	2	0	1	0	13
16:30	8	0	1	2	0	11	67	12	5	6	0	90	17	3	0	1	1	22
16:45	6	0	2	0	0	8	61	10	3	8	0	82	13	3	0	1	0	17
H/TOT	25	2	3	4	0	34	274	42	20	31	0	367	81	11	0	3	2	97
17:00	17	0	1	0	1	19	84	18	6	7	0	115	23	5	2	2	0	32
17:15	3	1	0	2	0	6	78	13	2	9	0	102	17	4	1	1	0	23
17:30	6	0	0	1	0	7	79	9	6	6	0	100	19	4	0	1	0	24
17:45	9	0	0	0	0	9	72	17	2	9	0	100	14	3	0	1	0	18
H/TOT	35	1	1	3	1	41	313	57	16	31	0	417	73	16	3	5	0	97
18:00	4	0	0	0	0	4	86	10	5	8	0	109	15	2	1	4	0	22
18:15	2	0	0	0	0	2	67	12	4	8	0	91	26	4	0	0	0	30
18:30	6	1	0	0	0	7	91	16	3	11	0	121	25	2	1	2	0	30
18:45	6	0	1	0	0	7	74	9	3	7	0	93	44	0	2	3	1	50
H/TOT	18	1	1	0	0	20	318	47	15	34	0	414	110	8	4	9	1	132
P/TOT	378	39	23	26	1	467	3370	603	308	593	7	4881	754	119	44	113	14	1044

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 4						TOT	MOVEMENT 5						TOT	MOVEMENT 6						TOT
	CAR	LGV	HGVR	HGVA	AGRI	CAR		LGV	HGVR	HGVA	AGRI	CAR	LGV		HGVR	HGVA	AGRI				
07:00	11	2	1	5	0	19	0	0	0	0	0	0	1	0	0	0	0	1			
07:15	7	4	1	1	0	13	1	0	0	0	0	1	0	0	0	0	0	0			
07:30	11	3	4	1	0	19	3	0	0	0	0	3	2	0	0	0	0	2			
07:45	14	4	1	3	0	22	7	2	0	1	0	10	1	0	0	0	0	1			
H/TOT	43	13	7	10	0	73	11	2	0	1	0	14	4	0	0	0	0	4			
08:00	17	4	1	1	0	23	4	0	1	2	0	7	0	0	1	0	0	1			
08:15	16	7	0	1	0	24	7	1	0	1	0	9	0	0	0	0	0	0			
08:30	11	6	4	5	0	26	5	1	0	0	0	6	1	0	1	0	0	2			
08:45	20	4	3	3	0	30	6	0	0	4	0	10	2	2	0	0	0	4			
H/TOT	64	21	8	10	0	103	22	2	1	7	0	32	3	2	2	0	0	7			
09:00	23	4	2	2	0	31	6	0	0	2	0	8	4	0	1	0	0	5			
09:15	16	1	2	8	1	28	2	0	0	2	0	4	1	2	0	0	0	3			
09:30	15	4	1	3	0	23	4	0	0	1	0	5	5	0	0	1	0	6			
09:45	22	1	2	3	0	28	0	0	0	0	0	2	5	1	1	0	0	7			
H/TOT	76	10	7	16	1	110	14	0	0	5	0	19	15	3	2	1	0	21			
10:00	23	2	2	1	0	28	6	1	0	3	0	10	2	0	0	1	0	3			
10:15	13	5	1	3	0	22	3	0	0	2	0	5	7	2	0	1	0	10			
10:30	18	1	2	2	1	24	1	1	3	1	0	6	7	0	1	0	0	8			
10:45	13	3	6	3	0	25	6	0	1	1	0	8	0	0	0	0	0	0			
H/TOT	67	11	11	9	1	99	16	2	4	7	0	29	16	2	1	2	0	21			
11:00	12	2	2	2	1	19	3	1	0	2	0	6	5	0	0	0	0	5			
11:15	12	1	3	6	1	23	3	0	0	2	0	5	8	0	2	0	0	10			
11:30	23	4	2	2	0	31	5	1	2	0	0	8	2	0	0	0	0	2			
11:45	25	0	2	1	0	28	6	0	0	2	0	8	5	0	0	0	0	5			
H/TOT	72	7	9	11	2	101	17	2	2	6	0	27	20	0	2	0	0	22			
12:00	29	4	0	2	0	35	8	1	2	4	0	15	4	0	0	0	0	4			
12:15	10	3	1	6	0	20	8	0	0	4	0	12	4	0	0	0	0	4			
12:30	18	3	1	9	0	31	6	2	0	4	0	12	1	0	0	0	0	1			
12:45	27	3	2	5	0	37	9	3	0	1	0	13	5	1	0	0	0	6			
H/TOT	84	13	4	22	0	123	31	6	2	13	0	52	14	1	0	0	0	15			

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	25	6	1	6	1	39	14	0	0	4	0	18	2	0	0	0	0	2
13:15	17	3	1	1	0	22	1	0	0	1	0	2	2	1	1	0	0	4
13:30	26	6	0	4	0	36	4	2	0	0	0	6	0	0	0	1	0	1
13:45	29	1	3	0	3	36	7	0	0	2	0	9	1	1	0	0	0	2
H/TOT	97	16	5	11	4	133	26	2	0	7	0	35	5	2	1	1	0	9
14:00	18	4	1	3	0	26	9	0	0	0	0	9	2	0	0	0	0	2
14:15	31	3	2	4	0	40	5	0	2	0	0	7	1	0	1	0	0	2
14:30	17	4	2	4	0	27	2	1	0	0	0	5	5	0	1	0	0	6
14:45	18	5	1	9	1	34	4	0	1	0	0	7	0	0	0	0	0	0
H/TOT	84	16	6	20	1	127	20	1	3	4	0	28	8	0	2	0	0	10
15:00	19	5	3	4	0	31	9	0	0	0	0	9	4	1	1	0	0	6
15:15	17	4	0	4	0	25	8	3	0	0	0	10	4	0	0	1	0	5
15:30	16	1	3	1	1	22	5	1	0	1	0	7	3	0	1	1	0	5
15:45	18	4	0	4	0	26	3	0	0	1	0	3	1	1	1	0	0	3
H/TOT	70	14	6	13	1	104	24	3	0	2	0	29	12	2	3	2	0	19
16:00	24	3	3	2	1	33	6	0	0	0	0	6	8	2	1	0	0	11
16:15	20	0	0	2	0	22	5	1	1	1	0	8	1	1	0	0	0	2
16:30	27	6	0	5	0	38	4	1	0	1	0	6	2	1	0	0	0	3
16:45	31	6	1	6	0	44	6	1	0	0	0	7	2	0	0	0	0	2
H/TOT	102	15	4	15	1	137	21	3	1	2	0	27	13	4	1	0	0	18
17:00	35	14	4	0	0	53	10	1	0	0	0	11	3	0	0	0	0	3
17:15	41	8	0	6	0	55	6	3	1	0	0	10	1	0	0	0	0	1
17:30	50	4	1	8	1	64	3	2	1	1	0	7	1	0	0	0	0	1
17:45	58	8	1	3	0	70	9	0	0	0	0	9	1	0	0	0	0	1
H/TOT	184	34	6	17	1	242	28	6	2	1	0	37	6	0	0	0	0	6
18:00	45	7	4	2	1	59	10	0	0	1	0	11	5	0	0	0	0	5
18:15	31	5	0	2	0	38	3	0	0	0	0	3	2	0	1	0	0	3
18:30	36	5	1	2	0	44	4	4	0	0	0	8	11	1	1	0	0	13
18:45	35	8	0	5	2	50	2	0	0	1	0	3	4	0	0	0	0	4
H/TOT	147	25	5	11	3	191	19	4	0	2	0	25	22	1	2	0	0	25
P/TOT	1090	195	78	165	15	1543	249	33	15	57	0	354	138	17	16	6	0	177

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 7						MOVEMENT 8						MOVEMENT 9					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	45	6	5	6	0	62	0	0	0	0	0	0
07:15	0	0	0	0	0	0	36	6	7	15	0	64	4	0	0	0	0	4
07:30	2	0	0	0	0	2	39	5	3	8	0	55	2	0	0	0	0	2
07:45	2	0	1	0	0	3	72	14	13	12	0	111	3	0	0	1	0	4
H/TOT	4	0	1	0	0	5	192	31	28	41	0	292	9	0	0	1	0	10
08:00	3	3	0	0	0	6	71	10	8	8	0	97	12	6	0	0	0	18
08:15	5	3	0	0	0	8	74	9	11	17	0	111	8	1	0	0	0	9
08:30	2	2	2	0	0	6	61	10	4	0	0	84	5	2	2	0	0	9
08:45	6	0	1	0	0	7	61	9	1	6	0	77	14	3	0	0	0	17
H/TOT	16	8	3	0	0	27	267	38	24	40	0	369	39	12	2	0	0	53
09:00	21	3	1	0	0	25	55	8	8	11	1	83	21	4	0	1	0	26
09:15	6	1	1	0	1	9	71	1	5	9	0	95	4	2	2	1	0	9
09:30	14	2	0	1	0	17	58	15	9	19	0	101	9	4	1	0	0	14
09:45	12	4	0	0	0	16	70	4	5	11	0	90	6	1	0	0	0	7
H/TOT	53	10	2	1	1	67	254	37	27	50	1	369	40	11	3	2	0	56
10:00	15	1	0	1	0	17	75	10	4	19	1	109	9	2	0	0	0	11
10:15	9	1	0	0	0	10	53	4	4	19	0	80	11	3	0	0	0	14
10:30	11	0	0	0	0	11	53	9	7	12	0	81	8	4	2	0	0	14
10:45	6	0	0	0	0	6	61	11	9	8	0	89	16	3	0	1	0	20
H/TOT	41	2	0	1	0	44	242	34	24	58	1	359	44	12	2	1	0	59
11:00	10	1	0	0	0	11	52	5	4	25	0	86	4	3	0	0	0	7
11:15	8	1	0	0	0	9	51	7	12	15	0	85	8	3	0	0	0	11
11:30	5	1	2	0	0	8	53	4	12	9	0	78	21	4	1	0	0	26
11:45	8	0	0	0	0	8	57	6	11	20	0	94	15	2	3	0	0	20
H/TOT	31	3	2	0	0	36	213	22	39	69	0	343	48	12	4	0	0	64
12:00	6	0	0	0	0	6	59	7	9	12	0	87	6	0	0	2	0	8
12:15	8	2	0	0	0	10	65	6	8	13	0	92	12	1	0	1	0	14
12:30	14	0	1	0	0	15	43	2	7	15	0	67	8	0	0	0	0	8
12:45	12	1	0	0	0	13	62	6	22	18	0	108	10	0	1	0	0	11
H/TOT	40	3	1	0	0	44	229	21	46	58	0	354	36	1	1	3	0	41

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 7						MOVEMENT 8						MOVEMENT 9					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	11	0	0	0	0	11	71	9	4	13	0	97	19	2	0	0	0	21
13:15	12	1	0	0	0	13	75	5	5	17	0	102	15	1	0	0	0	16
13:30	17	1	0	0	0	18	60	8	14	16	1	99	17	0	0	0	0	17
13:45	15	0	0	0	0	15	61	6	8	9	0	84	11	3	0	0	0	14
H/TOT	55	2	0	0	0	57	267	28	31	55	1	382	62	6	0	0	0	68
14:00	13	1	0	0	0	14	76	4	8	11	0	99	9	1	0	0	0	10
14:15	8	0	0	0	0	8	62	8	7	15	0	92	5	4	0	0	0	9
14:30	11	0	0	0	0	11	69	10	8	14	1	102	16	3	1	1	0	21
14:45	3	0	0	0	0	3	76	10	6	18	0	110	7	0	0	0	0	7
H/TOT	35	1	0	0	0	36	283	32	29	58	1	403	37	8	1	1	0	47
15:00	8	0	0	0	0	8	71	18	7	12	0	108	9	4	0	0	0	13
15:15	9	0	0	0	0	9	76	9	9	12	0	106	9	1	1	0	0	11
15:30	14	1	1	1	0	17	66	10	7	8	0	91	7	4	0	0	0	11
15:45	11	2	0	1	0	14	78	7	7	8	0	100	13	1	1	0	0	15
H/TOT	42	3	1	2	0	48	291	44	30	40	0	405	38	10	2	0	0	50
16:00	21	3	0	0	0	24	75	17	8	14	1	115	11	0	0	0	0	11
16:15	9	0	0	1	0	10	76	9	2	5	0	92	7	1	0	0	0	8
16:30	11	4	0	0	0	15	68	10	8	12	0	98	18	1	0	0	0	19
16:45	11	1	0	0	0	12	76	9	4	14	0	103	6	1	0	1	0	8
H/TOT	52	8	0	1	0	61	295	45	22	45	1	408	42	3	0	1	0	46
17:00	9	1	0	0	0	10	72	10	3	8	2	95	15	1	0	0	0	16
17:15	11	2	0	0	0	13	80	11	2	7	0	100	17	1	0	0	0	18
17:30	13	1	0	0	0	14	95	18	8	7	0	128	13	0	1	0	0	14
17:45	6	1	0	0	0	7	85	8	2	4	0	99	19	2	0	0	0	21
H/TOT	39	5	0	0	0	44	332	47	15	26	2	422	64	4	1	0	0	69
18:00	3	2	0	0	0	5	100	12	4	11	0	127	10	0	0	0	0	10
18:15	7	0	0	0	0	7	89	16	6	6	1	118	8	0	0	0	0	8
18:30	11	0	0	0	0	11	88	15	4	13	0	120	5	0	1	0	0	6
18:45	13	0	0	0	0	13	99	8	2	12	0	121	2	0	0	0	0	2
H/TOT	34	2	0	0	0	36	376	51	16	42	1	486	25	0	1	0	0	26
P/TOT	442	47	10	5	1	505	3241	430	331	582	8	4592	484	79	17	9	0	589

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	5	0	0	4	0	9	1	0	0	1	0	2	6	0	1	1	0	8
07:15	7	2	0	0	0	9	5	1	0	0	0	6	3	0	0	0	0	3
07:30	9	3	2	1	0	15	5	3	0	0	0	8	4	2	0	3	0	9
07:45	5	0	0	0	0	5	4	1	0	0	0	5	9	1	0	0	0	10
H/TOT	26	5	2	5	0	38	15	5	0	1	0	21	22	3	1	4	0	30
08:00	8	4	0	0	0	12	2	2	0	0	0	4	3	1	0	1	0	5
08:15	5	5	0	0	0	10	8	1	0	0	0	9	4	0	0	0	0	4
08:30	10	1	1	0	0	12	3	2	0	0	0	6	7	1	0	1	0	9
08:45	29	6	2	0	0	37	23	1	2	0	0	27	17	3	0	0	0	20
H/TOT	52	16	3	0	0	71	36	6	2	2	0	46	31	5	0	2	0	38
09:00	14	2	0	0	0	16	17	0	2	0	0	19	16	5	0	1	0	22
09:15	21	5	0	0	0	26	8	0	1	2	0	11	3	2	1	3	2	11
09:30	8	4	2	1	0	15	7	1	0	2	0	10	6	2	0	0	0	8
09:45	14	5	0	1	0	20	6	0	1	2	0	9	10	2	1	1	0	14
H/TOT	57	16	2	2	0	77	38	1	4	6	0	49	35	11	2	5	2	55
10:00	12	2	1	1	0	16	9	2	0	1	0	12	5	1	1	2	0	9
10:15	21	0	0	0	0	21	5	1	0	1	0	7	6	2	1	0	0	9
10:30	15	5	0	2	0	22	8	2	0	3	0	13	6	4	2	0	0	12
10:45	16	7	3	0	0	26	3	1	1	2	0	7	7	0	1	1	0	9
H/TOT	64	14	4	3	0	85	25	6	1	7	0	39	24	7	5	3	0	39
11:00	8	2	1	2	0	13	7	2	1	3	0	13	4	2	1	0	0	7
11:15	15	1	1	1	0	18	7	2	0	1	0	10	3	1	2	1	0	7
11:30	12	1	1	1	0	15	8	1	0	2	1	12	9	3	0	0	0	12
11:45	19	3	1	1	0	24	5	2	1	2	0	10	10	1	0	0	1	12
H/TOT	54	7	4	5	0	70	27	7	2	8	1	45	26	7	3	1	1	38
12:00	15	2	2	2	0	21	7	2	0	4	1	14	10	3	0	0	0	13
12:15	19	4	0	0	0	23	9	1	0	3	0	13	8	2	2	0	0	12
12:30	18	2	1	0	0	21	9	0	0	1	0	10	8	0	0	0	0	8
12:45	20	1	1	0	0	22	7	0	0	3	0	10	22	0	0	1	0	23
H/TOT	72	9	4	2	0	87	32	3	0	11	1	47	48	5	2	1	0	56

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 01

DATE: 5th April 2005

LOCATION: N8/R665

DAY: Tuesday

TIME	MOVEMENT 10						MOVEMENT 11						MOVEMENT 12					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	24	1	0	1	0	26	5	1	1	1	0	8	12	6	1	0	0	19
13:15	14	1	0	0	0	15	2	0	1	1	0	4	18	0	1	1	0	20
13:30	18	2	0	0	0	20	10	3	0	5	0	18	13	1	1	0	0	15
13:45	9	1	0	0	0	10	18	1	0	0	0	19	15	0	0	0	0	15
H/TOT	65	5	0	1	0	71	35	5	2	7	0	49	58	7	3	1	0	69
14:00	19	2	2	0	0	23	14	5	1	2	0	22	20	3	0	0	0	23
14:15	23	2	1	0	0	26	9	0	0	5	0	14	11	0	0	2	0	13
14:30	14	0	0	1	0	15	5	3	0	0	0	11	8	0	0	0	0	8
14:45	16	1	1	0	0	18	11	0	0	0	0	11	16	1	0	3	0	20
H/TOT	72	5	4	1	0	82	39	8	1	10	0	58	55	4	0	5	0	64
15:00	18	2	1	0	0	21	8	0	1	3	0	12	7	0	1	0	0	8
15:15	18	2	0	0	0	20	8	1	0	1	0	10	8	1	1	2	0	12
15:30	19	3	2	0	0	24	12	2	1	0	0	15	9	0	2	0	0	11
15:45	16	3	1	1	0	21	10	4	0	0	0	14	18	2	3	2	1	26
H/TOT	71	10	4	1	0	86	38	7	2	4	0	51	42	3	7	4	1	57
16:00	12	5	4	0	0	21	10	2	2	1	0	15	15	1	1	1	0	18
16:15	13	1	3	0	0	17	4	1	2	2	0	9	9	2	0	1	0	12
16:30	17	4	0	0	0	21	4	3	0	1	0	8	6	0	0	0	1	7
16:45	9	2	0	1	0	12	12	2	0	1	1	16	9	5	0	4	0	18
H/TOT	51	12	7	1	0	71	30	8	4	5	1	48	39	8	1	6	1	55
17:00	10	5	0	0	0	15	8	1	0	0	0	9	12	1	0	0	0	13
17:15	14	2	1	0	0	17	8	3	0	0	0	11	18	5	0	2	0	25
17:30	18	1	0	0	0	19	14	2	0	0	0	16	15	4	1	1	0	21
17:45	13	0	0	0	0	13	12	1	0	0	0	13	9	5	0	0	0	14
H/TOT	55	8	1	0	0	64	42	7	0	0	0	49	54	15	1	3	0	73
18:00	17	2	0	0	0	19	12	0	0	0	0	12	19	1	0	0	0	20
18:15	10	2	1	0	0	13	5	2	0	1	0	8	14	0	0	0	0	14
18:30	12	0	0	0	0	12	2	0	0	0	0	2	8	0	0	0	0	8
18:45	14	0	0	1	0	15	20	1	0	0	0	21	9	0	1	1	0	11
H/TOT	53	4	1	1	0	59	39	3	0	1	0	43	50	1	1	1	0	53
P/TOT	692	111	36	22	0	861	396	66	18	62	3	545	484	76	26	36	5	627

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 02

DATE: 5th April 2005

LOCATION: R667/Unc to Ballyporeen

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	1	0	0	0	0	1	2	0	0	0	0	2	10	1	0	0	0	11
07:15	2	0	0	0	0	2	3	0	0	0	0	3	11	2	1	0	0	14
07:30	3	0	0	0	0	3	6	0	1	0	0	7	13	3	3	1	0	20
07:45	2	0	0	0	0	2	4	4	1	1	0	10	20	5	3	0	0	28
H/TOT	8	0	0	0	0	8	15	4	2	1	0	22	54	11	7	1	0	73
08:00	6	1	0	0	0	7	9	5	1	1	0	16	13	5	1	0	0	19
08:15	2	0	1	0	0	3	14	3	0	0	0	17	17	3	3	0	0	23
08:30	3	1	0	1	0	5	10	3	1	0	0	14	21	7	2	0	0	30
08:45	5	1	0	0	0	6	11	2	0	0	0	13	14	0	0	0	2	16
H/TOT	16	3	1	1	0	21	44	13	2	1	0	60	65	15	6	0	2	88
09:00	6	1	0	1	0	8	16	1	4	0	1	22	22	2	1	0	0	25
09:15	4	1	0	0	0	5	32	5	1	0	1	39	46	5	3	1	0	55
09:30	13	2	1	0	1	17	20	4	0	0	0	24	26	3	0	0	0	29
09:45	8	1	0	0	0	9	2	1	0	0	1	14	11	2	0	0	0	13
H/TOT	31	5	1	1	1	39	80	11	5	0	3	99	105	12	4	1	0	122
10:00	4	3	0	1	1	9	12	2	0	0	0	14	11	3	0	0	0	14
10:15	2	1	0	0	0	3	14	1	0	0	0	15	15	0	0	0	2	17
10:30	3	1	1	1	0	6	16	5	0	0	0	21	12	3	0	0	1	16
10:45	2	2	1	0	1	6	16	4	3	1	1	25	15	2	2	0	0	19
H/TOT	11	7	2	2	2	24	58	12	3	1	1	75	53	8	2	0	3	66
11:00	8	0	0	2	0	10	12	2	0	0	0	14	12	5	3	0	0	20
11:15	8	0	0	0	2	10	8	1	0	0	0	9	12	3	0	0	0	15
11:30	5	1	0	0	0	6	7	5	1	0	0	13	9	3	2	1	2	17
11:45	5	0	0	1	0	6	10	3	1	0	0	14	8	1	1	0	0	10
H/TOT	26	1	0	3	2	32	37	11	2	0	0	50	41	12	6	1	2	62
12:00	7	4	0	0	0	11	13	1	0	2	0	16	16	1	2	0	0	19
12:15	3	3	0	0	0	6	18	0	3	0	0	21	11	2	0	0	0	13
12:30	7	4	0	0	1	12	15	4	0	0	0	19	26	2	0	0	0	28
12:45	6	1	0	0	0	7	19	3	1	0	0	23	15	0	0	0	0	15
H/TOT	23	12	0	0	1	36	65	8	4	2	0	79	68	5	2	0	0	75

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 02

DATE: 5th April 2005

LOCATION: R667/Unc to Ballyporeen

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	11	2	1	0	1	15	4	0	0	0	0	4	9	1	2	0	1	13
13:15	12	0	0	0	0	12	12	2	1	0	0	15	11	2	1	1	0	15
13:30	7	1	1	0	0	9	13	2	0	1	0	16	16	5	0	0	0	21
13:45	4	2	0	1	0	7	14	3	0	0	0	17	19	1	0	0	0	20
H/TOT	34	5	2	1	1	43	43	7	1	1	0	52	55	9	3	1	1	69
14:00	8	1	0	1	1	11	15	1	0	0	0	16	10	1	2	1	0	14
14:15	9	0	0	0	0	9	15	1	1	0	0	17	5	1	1	0	0	7
14:30	9	1	1	0	0	11	13	2	0	0	0	15	7	3	0	0	0	10
14:45	9	1	0	0	0	10	15	1	0	0	1	18	11	1	2	0	0	14
H/TOT	35	3	1	1	1	41	58	5	1	1	1	66	33	6	5	1	0	45
15:00	6	3	0	1	0	10	30	1	1	0	0	32	33	2	2	0	1	38
15:15	9	2	0	0	0	11	13	1	0	1	0	15	12	4	0	0	1	17
15:30	10	0	0	0	0	10	9	3	0	0	0	12	9	5	0	1	0	15
15:45	11	1	0	0	0	12	13	3	1	0	1	18	10	1	0	0	0	11
H/TOT	36	6	0	1	0	43	65	8	2	1	1	77	64	12	2	1	2	81
16:00	8	0	0	0	0	8	18	1	1	0	0	20	10	1	0	0	0	11
16:15	11	0	0	3	0	14	10	4	1	0	0	15	9	2	1	0	0	12
16:30	11	1	1	0	0	13	19	2	1	0	0	22	13	0	0	0	0	13
16:45	10	2	0	0	0	12	22	2	0	0	0	24	9	1	2	0	0	12
H/TOT	40	3	1	3	0	47	69	9	3	0	0	81	41	4	3	0	0	48
17:00	14	4	2	1	0	21	31	2	0	0	0	33	10	1	1	1	0	13
17:15	20	4	0	1	0	25	24	10	0	0	0	34	11	7	0	0	0	18
17:30	17	6	0	0	0	23	30	9	1	0	0	40	16	3	0	0	0	19
17:45	15	6	1	0	0	22	28	4	1	0	0	33	12	1	0	0	0	13
H/TOT	66	20	3	2	0	91	113	25	2	0	0	140	49	12	1	1	0	63
18:00	17	4	0	0	0	21	23	5	1	0	0	29	16	2	0	1	0	19
18:15	25	1	0	0	0	26	22	2	0	0	0	24	8	3	0	0	0	11
18:30	11	3	0	0	0	14	26	5	1	0	1	33	13	2	1	0	0	16
18:45	16	2	1	0	0	19	27	3	1	0	0	31	14	1	0	0	1	16
H/TOT	69	10	1	0	0	80	98	15	3	0	1	117	51	8	1	1	1	62
P/TOT	395	75	12	15	8	505	745	128	30	8	7	918	679	114	42	8	11	854

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 02

DATE: 5th April 2005

LOCATION: R667/Unc to Ballyporeen

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	14
07:15	1	0	0	0		1	1	0	0	0	0	1	15	1	0	0	0	16
07:30	0	0	0	0	0	0	1	0	1	0	0	2	18	3	0	0	0	21
07:45	1	0	0	0	1	2	2	0	0	0	0	2	17	3	1	0	0	21
H/TOT	2	0	0	0	1	3	4	0	1	0	0	5	63	8	1	0	0	72
08:00	1	0	0	0	0	1	1	0	0	0	0	1	14	2	0	0	0	16
08:15	1	0	0	0	1	2	2	2	0	0	0	5	10	2	0	0	0	12
08:30	1	0	0	0	0	1	0	1	0	0	0	1	17	3	0	0	0	20
08:45	0	0	0	0	0	0	6	1	0	0	0	7	18	2	1	0	0	21
H/TOT	3	0	0	0	1	4	9	4	0	0	1	14	59	9	1	0	0	69
09:00	1	1	0	0	1	3	4	1	0	0	0	5	3	3	0	0	0	6
09:15	2	0	0	0	0	2	2	0	0	0	1	3	11	2	0	1	0	14
09:30	5	0	0	0	0	5	1	0	0	0	0	1	7	2	1	0	1	11
09:45	3	0	0	0	1	4	1	1	0	0	0	2	11	1	0	0	1	13
H/TOT	11	1	0	0	2	14	8	2	0	0	1	11	32	8	1	1	2	44
10:00	0	0	0	0	0	0	1	0	0	0	1	2	13	2	0	0	0	15
10:15	0	0	0	0	0	0	0	1	0	0	0	1	7	0	0	1	0	8
10:30	0	0	0	0	0	0	1	0	0	0	0	1	2	1	1	0	0	4
10:45	0	0	0	0	0	0	0	0	0	0	0	0	9	3	0	1	1	14
H/TOT	0	0	0	0	0	0	2	1	0	0	1	4	31	6	1	2	1	41
11:00	2	0	0	0	0	2	1	0	0	0	1	2	9	0	2	1	0	12
11:15	2	0	0	0	0	2	1	0	0	1	1	3	8	0	0	0	0	8
11:30	2	0	0	0	0	2	1	1	0	0	0	2	11	2	0	1	0	14
11:45	2	0	0	0	0	2	2	0	0	0	0	2	12	0	0	2	0	14
H/TOT	8	0	0	0	0	8	5	1	0	1	2	9	40	2	2	4	0	48
12:00	2	0	0	0	0	2	0	0	0	0	0	0	6	0	0	0	1	7
12:15	1	0	0	0	0	1	2	0	0	0	0	2	5	1	1	0	0	7
12:30	3	0	0	0	0	3	2	0	0	0	0	2	7	0	0	0	1	8
12:45	2	1	0	0	0	3	2	1	0	0	0	3	9	2	1	0	2	14
H/TOT	8	1	0	0	0	9	6	1	0	0	0	7	27	3	2	0	4	36

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 02

DATE: 5th April 2005

LOCATION: R667/Unc to Ballyporeen

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	2	1	0	0	0	3	1	0	0	0	0	1	7	0	0	0	0	7
13:15	0	0	0	0	0	0	2	0	0	0	0	2	6	1	0	0	0	7
13:30	5	0	0	0	0	5	3	0	0	0	0	3	8	1	1	2	0	12
13:45	0	0	0	0	0	0	1	0	0	0	0	1	15	1	0	0	0	16
H/TOT	7	1	0	0	0	8	7	0	0	0	0	7	36	3	1	2	0	42
14:00	1	0	0	0	0	1	0	0	0	0	0	0	3	2	0	0	0	5
14:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
14:30	0	0	0	0	0	0	3	0	0	0	0	3	6	0	1	0	0	7
14:45	1	0	0	0	0	1	4	0	0	0	0	4	8	1	0	1	0	10
H/TOT	2	0	0	0	0	2	7	0	0	0	0	7	21	3	1	1	0	26
15:00	4	0	0	0	0	4	4	0	0	0	0	4	11	0	1	1	0	13
15:15	0	1	0	0	1	2	1	0	0	0	0	1	8	1	1	0	0	10
15:30	0	0	0	0	0	0	0	0	0	0	0	1	8	2	0	0	0	10
15:45	1	0	0	0	0	1	0	0	0	0	0	1	6	1	0	0	0	7
H/TOT	5	1	0	0	1	7	7	0	0	0	0	7	33	4	2	1	0	40
16:00	5	0	0	0	0	5	2	1	0	0	0	3	4	2	0	1	0	7
16:15	1	1	0	0	0	2	2	0	0	0	0	2	8	2	0	0	0	10
16:30	3	0	0	0	0	3	1	0	0	0	0	1	6	0	0	0	0	6
16:45	0	0	0	0	0	0	2	0	0	0	0	2	8	1	0	0	0	9
H/TOT	9	1	0	0	0	10	7	1	0	0	0	8	26	5	0	1	0	32
17:00	3	0	0	0	0	3	2	0	0	0	0	2	4	1	1	1	0	7
17:15	2	0	0	0	0	2	5	0	0	0	0	5	11	2	2	0	0	15
17:30	4	2	1	0	0	7	0	0	0	0	0	0	7	1	0	0	0	8
17:45	1	1	0	0	0	2	0	1	0	2	0	3	3	1	0	1	0	5
H/TOT	10	3	1	0	0	14	7	1	0	2	0	10	25	5	3	2	0	35
18:00	1	0	0	0	0	1	2	0	0	0	0	2	3	1	0	0	0	4
18:15	0	1	0	0	0	1	0	0	0	0	0	0	14	0	0	0	0	14
18:30	0	2	0	0	0	2	1	0	0	0	0	1	9	2	0	0	0	11
18:45	1	0	0	0	0	1	1	0	0	0	0	1	7	1	0	0	0	8
H/TOT	2	3	0	0	0	5	4	0	0	0	0	4	33	4	0	0	0	37
P/TOT	67	11	1	0	5	84	73	11	1	3	5	93	426	60	15	14	7	522

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 03

DATE: 5th April 2005

LOCATION: R665/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
07:30	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:45	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	2	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
08:00	3	0	1	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0
08:15	1	2	1	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1
08:30	4	2	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
08:45	3	2	0	0	0	5	0	0	0	0	0	0	1	1	0	0	0	2
H/TOT	11	6	3	1	0	21	0	0	0	0	0	0	1	2	0	0	0	3
09:00	10	2	1	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0
09:15	5	0	2	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
09:45	3	1	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	1
H/TOT	18	3	4	0	0	25	0	0	0	0	0	0	1	0	0	0	0	1
10:00	4	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
10:15	4	0	2	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0
10:30	6	1	0	1	0	8	0	0	0	0	1	1	1	0	0	0	0	1
10:45	4	1	0	1	0	6	0	0	0	0	0	0	1	0	0	0	0	1
H/TOT	18	3	2	3	0	26	0	0	0	0	1	1	2	0	0	0	0	2
11:00	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11:15	6	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
11:30	5	1	1	0	0	7	0	0	0	0	1	1	0	0	0	0	0	0
11:45	6	1	0	0	0	7	0	0	0	0	0	0	1	0	0	0	0	1
H/TOT	18	4	1	0	0	23	0	0	0	0	1	1	1	0	0	0	0	1
12:00	7	2	1	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0
12:15	7	2	0	1	0	10	1	0	0	0	0	1	1	0	0	0	0	1
12:30	7	0	1	1	0	9	0	0	0	0	0	0	0	0	0	0	0	0
12:45	1	1	0	0	0	2	2	0	0	0	0	2	1	0	0	0	0	1
H/TOT	22	5	2	2	0	31	3	0	0	0	0	3	2	0	0	0	0	2

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 03

DATE: 5th April 2005

LOCATION: R665/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 1						MOVEMENT 2						MOVEMENT 3					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	9	1	0	0	0	10	1	0	0	0	0	1	0	0	0	0	0	0
13:15	4	0	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	1
13:30	6	1	2	0	0	9	1	0	0	0	0	1	0	0	0	0	0	0
13:45	7	1	1	1	0	10	0	0	0	0	0	0	1	0	0	0	0	1
H/TOT	26	3	3	1	0	33	2	0	0	0	0	2	2	0	0	0	0	2
14:00	6	0	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0
14:15	6	0	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
14:30	4	1	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
14:45	5	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	21	1	2	1	1	26	0	0	0	0	0	0	0	0	0	0	0	0
15:00	8	3	0	2	0	13	0	0	0	0	0	0	1	0	0	0	0	1
15:15	3	1	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
15:30	7	0	0	1	0	8	0	0	1	0	0	2	0	0	0	0	0	0
15:45	3	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	21	5	1	3	0	30	1	0	1	0	0	2	1	0	0	0	0	1
16:00	4	0	2	0	0	6	0	0	0	0	0	0	1	0	0	0	0	1
16:15	10	1	0	0	0	11	0	0	0	0	0	0	1	0	0	0	0	1
16:30	6	0	0	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1
16:45	7	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	27	1	2	0	0	30	0	0	0	0	0	0	2	1	0	0	0	3
17:00	6	0	0	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0
17:15	12	3	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
17:30	7	3	0	0	0	10	0	1	0	0	0	1	0	1	0	0	0	1
17:45	3	0	0	0	0	3	1	0	0	0	0	1	1	0	0	0	0	1
H/TOT	28	6	0	0	0	34	2	1	0	0	0	3	1	1	0	0	0	2
18:00	13	1	0	0	0	14	0	0	0	0	0	0	0	1	0	0	0	1
18:15	14	2	0	0	0	16	1	1	0	0	0	2	1	0	0	0	0	1
18:30	3	1	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
18:45	10	0	0	0	0	10	1	0	0	0	0	1	0	0	0	0	0	0
H/TOT	40	4	1	0	0	45	2	1	0	0	0	3	1	1	0	0	0	2
P/TOT	252	43	22	11	1	329	10	2	1	0	2	15	14	5	0	0	0	19

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 03

DATE: 5th April 2005

LOCATION: R665/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
07:00	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1
07:30	2	1	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	1
07:45	1	0	0	0	0	1	2	0	0	0	0	2	0	1	0	0	0	1
H/TOT	4	1	0	0	0	5	3	0	0	0	0	3	1	2	0	0	0	3
08:00	3	1	0	0	0	4	4	0	0	0	2	6	2	1	0	0	1	4
08:15	5	1	0	0	0	6	3	0	0	0	0	3	8	2	0	0	0	10
08:30	3	0	0	0	0	3	10	0	0	0	1	11	9	1	0	0	0	10
08:45	3	1	0	0	0	4	5	0	0	0	0	5	9	1	0	0	1	11
H/TOT	14	3	0	0	0	17	22	0	0	0	3	25	28	5	0	0	2	35
09:00	3	1	0	0	0	4	1	0	0	0	0	1	7	0	0	1	0	8
09:15	2	0	0	0	0	2	1	0	0	0	0	1	6	1	1	1	0	9
09:30	1	2	0	0	0	3	0	0	0	0	0	6	8	0	0	0	0	8
09:45	4	0	1	0	0	5	0	0	0	0	2	8	2	2	1	0	0	5
H/TOT	10	3	1	0	0	14	14	0	0	0	2	16	23	3	2	2	0	30
10:00	3	0	0	0	0	3	4	0	0	0	1	5	8	2	0	0	0	10
10:15	0	1	0	0	0	1	0	0	0	0	2	2	0	2	0	0	0	2
10:30	0	0	0	0	0	0	4	3	0	0	0	7	5	1	0	1	0	7
10:45	1	2	0	0	0	3	2	0	1	0	0	3	5	1	0	0	0	6
H/TOT	4	3	0	0	0	7	10	3	1	0	3	17	18	6	0	1	0	25
11:00	0	0	0	0	0	0	2	2	0	0	0	4	2	1	0	1	0	4
11:15	3	0	0	0	0	3	4	0	0	0	1	5	7	2	0	1	0	10
11:30	1	0	0	0	0	1	1	0	0	0	0	1	6	1	0	2	0	9
11:45	2	1	1	0	0	4	3	0	0	0	0	3	3	2	1	0	0	6
H/TOT	6	1	1	0	0	8	10	2	0	0	1	13	18	6	1	4	0	29
12:00	0	0	0	0	0	0	2	0	0	0	0	2	6	3	0	1	0	10
12:15	3	2	0	0	0	5	2	0	0	0	1	3	2	0	0	0	0	2
12:30	0	0	0	0	1	1	5	3	0	0	0	8	4	0	0	0	1	5
12:45	1	0	0	0	0	1	3	0	0	0	0	3	3	1	0	2	0	6
H/TOT	4	2	0	0	1	7	12	3	0	0	1	16	15	4	0	3	1	23

ABACUS TRANSPORTATION SURVEYS

MITCHELSTOWN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION COUNTS

APRIL 2005
ATH/05/056

SITE: 03

DATE: 5th April 2005

LOCATION: R665/Unc to Kilworth

DAY: Tuesday

TIME	MOVEMENT 4						MOVEMENT 5						MOVEMENT 6					
	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT	CAR	LGV	HGVR	HGVA	AGRI	TOT
13:00	1	0	0	0	0	1	1	1	0	0	0	2	2	0	0	0	0	2
13:15	4	0	1	0	0	5	3	1	1	0	0	5	4	1	0	0	0	5
13:30	3	0	0	0	2	5	1	1	0	0	0	2	2	0	0	0	0	2
13:45	1	2	1	0	2	6	0	0	0	0	0	0	7	1	2	0	0	10
H/TOT	9	2	2	0	4	17	5	3	1	0	0	9	15	2	2	0	0	19
14:00	2	0	0	0	0	2	1	0	0	0	0	1	7	1	1	0	0	9
14:15	5	1	0	0	1	7	3	0	0	0	0	3	5	0	0	0	0	5
14:30	0	0	0	0	0	0	6	2	0	0	0	8	8	0	1	0	0	9
14:45	4	2	1	1	0	8	3	1	1	0	0	5	2	0	1	0	0	3
H/TOT	11	3	1	1	1	17	13	3	1	0	0	17	22	1	3	0	0	26
15:00	2	1	0	0	0	3	3	1	0	0	0	4	10	2	0	1	0	13
15:15	0	0	0	0	0	0	2	1	1	0	0	4	9	1	1	0	0	11
15:30	8	0	0	0	0	8	2	0	0	0	1	3	8	1	1	1	0	11
15:45	4	0	0	0	0	4	3	1	0	0	0	3	6	2	2	1	0	11
H/TOT	14	1	0	0	0	15	9	3	1	0	1	14	33	6	4	3	0	46
16:00	4	2	1	0	1	8	0	1	0	0	0	1	1	0	0	1	0	2
16:15	2	1	0	0	0	3	4	0	0	0	0	4	6	2	1	0	0	9
16:30	3	0	0	1	0	4	5	0	0	0	0	5	3	3	0	0	0	6
16:45	5	1	1	0	1	8	2	0	0	0	0	2	5	1	0	0	0	6
H/TOT	14	4	2	1	2	23	11	1	0	0	0	12	15	6	1	1	0	23
17:00	5	2	0	0	0	7	6	2	0	0	0	8	5	1	0	0	0	6
17:15	5	2	0	0	0	7	1	1	0	0	0	2	4	1	0	0	0	5
17:30	7	2	0	0	0	9	2	2	0	0	0	4	4	1	0	0	0	5
17:45	6	1	0	0	1	8	2	0	0	0	0	2	3	1	0	0	0	4
H/TOT	23	7	0	0	1	31	11	5	0	0	0	16	16	4	0	0	0	20
18:00	7	2	0	0	0	9	4	1	0	0	0	5	2	1	0	0	0	3
18:15	6	2	0	0	0	8	5	1	0	0	0	6	4	2	1	0	0	7
18:30	9	1	0	0	1	11	1	1	0	0	0	2	5	0	0	0	0	5
18:45	2	2	0	0	0	4	5	0	0	0	0	5	10	0	0	1	1	12
H/TOT	24	7	0	0	1	32	15	3	0	0	0	18	21	3	1	1	1	27
P/TOT	137	37	7	2	10	193	135	26	4	0	11	176	225	48	14	15	4	306

Appendix 12.2

Planning drawing No. 026140/01/01/PL01A

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13.0 CULTURAL HERITAGE

13.1 INTRODUCTION

This chapter comprises an archaeological assessment of the land intended for development and aims to evaluate the impacts that the development would have on the cultural heritage of the site and surrounding area.

There are no recorded archaeological sites within the development or within a 1km radius of the site. The nearest recorded site is a fulacht fiadh (CO028-039---) situated c. 1.5 km to the south west of the development, in the townland of Castlecooke. There are seventeen recorded archaeological sites within a 3km radius of the development, which reflect the archaeological background of the area and possibly the archaeological potential of the development site itself. This chapter was compiled in accordance with the most recent EPA Guidelines as published in 2002.

The following terms are referred to in this chapter and are defined below to avoid misinterpretation including:

Cultural Heritage

This is a general term used to incorporate aspects of the environment that are valued due to their age, beauty, history or tradition. It encompasses the following disciplines: archaeology, architecture, history, landscape and garden design, folklore and tradition, structures, features and other landmarks, language and dialect, religion and beliefs and settlements (Advice Notes on Current Practice in the preparation of Environmental Impact Statements, 1999).

Areas of Archaeological Potential

Certain fields or areas, for a variety of reasons, are listed as areas in which potential archaeological sites or features may be found, for example fulachta fiadh (Bronze Age cooking sites) are generally found in low-lying boggy areas.

Study Area

In order to obtain a comprehensive assessment of the Cultural Heritage Environment, the study area encompasses not only the development site, but a 3km radius of that site.

13.2 ASSESSMENT METHODOLOGY

This archaeological assessment was based on a desktop appraisal of the development and within a 3km radius of the site. A field inspection of the development was also conducted on the 16th and 18th of February, 2005.

13.2.1 Desk top Study

The desktop study included the following components;

- *Sites and Monuments Record (SMR)*: This record, compiled by the OPW, now part of the Department of the Environment, Heritage and Local Government, comprises a list of all known archaeological sites and monuments in the county and their location. It also lists and locates possible archaeological sites and sites known to occur in an area but with no exact location. It is accompanied by a set of constraint maps on which each site is marked
- *Record of Monuments and Places (RMP)*: This record was compiled in accordance with The National Monuments Act 1994. It provides an updated list of all known archaeological monuments and places of archaeological interest, with an accompanying set of constraint maps. It is an offence to interfere with any of the sites or monuments listed in the Record without first giving two months notice in writing to the National Monuments Service at the Department of Environment and Local Government
- *Archaeological Inventory of North Cork, Volume IV*: The inventories for each county are follow-ons by Dúchas, to the SMRs and RMPs. They give a written description of each archaeological site in the county. County Cork, Volume IV was published in 2000. Details of published sites within the study area are given in Appendix 13.1
- *Files of Archaeological Survey of Ireland, Co. Cork*: The files of the Cork Archaeological Survey were consulted to ascertain if any new archaeological sites have been added since publication of the Record of Monuments and Places (RMP). No new sites were noted
- *The County Development Plan (CDP) for County Cork, February 2003*: The Cultural Heritage section of the County Development Plan contains information on monuments of archaeological interest and buildings of architectural and historical interest in the county
- *The National Museum of Ireland Archives*: These files were consulted for all townlands within the study area. The topographical files contain the reports, including correspondence, present location and occasionally, illustrations of archaeological material recovered prior to 1975. The information on the material recovered post-1975 is now computerized and both sets of records were searched. There are no finds listed for the townlands within the study area
- *Database of Irish Excavation Reports (www.excavations.ie)*: This web site provides a database of summary reports of all archaeological excavations and investigations in Ireland undertaken since 1970. There was one excavation carried out in the townland of Castlecooke in 1982 as part of the Cork-Dublin Gas Pipeline (Cleary, R.M.1987 Castlecooke, Co. Cork in Cleary, R.M., Hurley, M.F &

Twohig, E.A. *Archaeological Excavations on the Cork-Dublin Gas Pipeline (1981-82)*, Cork Archaeological Studies No. 1, Department of Archaeology, University College Cork)

- *Previous archaeological report on the site:* An archaeological survey and report was carried out for a waste facility at the development site in 1996. This report was consulted
- *Documentary Sources:* All available literary sources were consulted including local histories and relevant journals
- *Cartographic Sources:* The first (1842), second (1905) and third (1934) editions of the Ordnance Survey six-inch maps were consulted

13.2.2 Consultation Process

Consultation with various agencies and individuals was conducted as part of this cultural heritage assessment, including:

- Cork County Council Heritage Officer
- Planning Officer for the Department of the Environment, Heritage and Local Government
- Cork County Council Conservation Officer
- Cork County Archaeologist

13.2.3 Field Inspection

The development consists of 23 fields, which were inspected to determine if any previously unrecorded archaeological remains or structures/features of cultural heritage interest were present (See Figure 13.1). A copy of the six-inch Rural Place Map and the three editions of the OS six-inch map were also used during field walking (See Figure 13.2 – 13.4).

The primary purpose of field inspections was to assess the physical environment in which the development is proposed and identify any features of cultural heritage significance, which have not been previously recorded. Any structures and buildings that make up the built fabric of the area were also identified. Current land use, local topography and environmental conditions were assessed to highlight possible Areas of Archaeological Potential (AAP).

13.3 THE FINDINGS

There are no recorded archaeological monuments listed in the RMP within the development area; however, within 3km of the site (referred to as the study area from here on in), there are 17 recorded archaeological sites listed in the RMP (Fig. 2.11.5).

The archaeological findings are referenced to historical timescales and can be divided into the following;

- *Prehistoric Period: (c. 7000 to 4000BC) – Neolithic (c. 4000 to 2000BC) – Bronze Age (c. 2000 to 600BC) – Iron Age (c. 500BC to 500AD),*
- *Early Christian Period: (c. 500 to 1100 AD),*
- *Medieval Period (1100AD to 1650),*
- *Post Medieval Period (c. 1650 – Present).*

An archaeological and historical overview of the study area provides evidence for human activity, both secular and ritual dating from the Bronze Age to modern times. The pace of landscape change in Ireland accelerated in the second half of the 20th century and many archaeological sites have been levelled by activities associated with modern development and progress such as agriculture, industry and infrastructural improvements. This has ensured that the present day archaeological landscape is not fully representative of the human occupation of this island, which has spanned some nine thousand years. Archaeological sites survive today as upstanding structures, earthwork monuments or subsurface remains.

As noted above there are no recorded archaeological monuments listed in the RMP within the development or within a 1km radius of the site; however, there are 17 archaeological sites and monuments listed in the Record of Monuments and Places (RMP) for Co. Cork within the study area. These include five *fulachta fiadh*, two possible standing stones, three possible ring forts, a possible souterrain, a possible cairn, a tower house, a country house, a Church of Ireland church and graveyard and a bridge. Full descriptions of all recorded archaeological sites within the study area are given in Appendix 13.1.

13.3.1 The Bronze Age

The Bronze Age is well represented in the study area in the form of five *fulachta fiadh* and two possible standing stones. The *fulachta fiadh* are situated in the townlands of Propoge (CO028-037---,CO028-038--- and CO028-040---) and Castlecooke (CO028-007--- and CO028-039---), located approximately 2.5km and 1.6km respectively from the development.

Fulachta fiadh are the most common prehistoric site type in the country and have been interpreted as cooking places, typically Bronze Age in date. They are recognisable as horseshoe-shaped mounds of heat-shattered stones, often located near a stream or in waterlogged areas. Water in a stone or wood-lined trough was brought to the boil by immersing hot stones in it. The stones were heated in a nearby fire and shattered on impact with the cold water in the trough. After each cooking session the stones were removed from the trough and thrown to the side, finally forming the characteristic mound of stones. Regular ploughing of the mound reduces it to a spread of heat-shattered stones in the field. It has been suggested that the hot water in the trough was used for cooking or may have also been used to provide steam for a sweat house.

Four of the *fulachta fiadh* in the study area are evident as grass covered spreads of burnt material while one of the *fulachta fiadh* in Castlecooke is evident as a partially overgrown kidney-shaped mound of burnt material. No definite *fulachta fiadh* were identified during field inspections; however, there are nine fields (2, 3, 4, 5, 7, 8, 9, 10 and 23) within the development, which contain a typical environment in which these monuments frequently occur.

The possible standing stones are situated in the townland of Ballinvoher (CO028-005--- and CO028-006---). Single upright stones are a common feature of the Irish countryside, and are known by several terms such as *gallán*, *dallán*, long stone etc. The term 'possible standing stone' is used where cartographic or local information suggests the existence of such a stone in the past but no visible surface trace remains at present. Standing stones sometimes served as Bronze Age burial markers, route markers or may have had some ritual function. It can be difficult to distinguish ancient standing stones from modern 'scratching stones' for cattle. There is no visible surface trace of the two standing stones in Ballinvoher.

13.3.2 The Early Christian Period

There are four archaeological monuments, dating to the Early Christian period within the study area; three possible ringforts and one possible souterrain. Christianity was introduced into Ireland during the late 4th century, becoming widely established during the second half of the sixth century. Archaeological excavation has ascertained that ringforts were enclosed farmsteads, used in Early Christian times (Stout, 1997, 32). The possible ringforts are located in the townlands of Billeragh West (CO020-020---), Lyre (CO020-022---) and a possible ringfort and possible souterrain in the townland Skeheen Upper (CO020-019--- and CO020-024---).

These monuments are often referred to as *ráth* or *lios*. They are generally circular or sub-circular areas enclosed by an earthen bank, made up of material thrown up from a concentric fosse outside the bank. The diameter of the ringfort is normally between 25m and 50m. The possible ringfort in Billeragh West consists of a raised D-shaped area, defined by an earthen bank. The example in Lyre consists of a roughly circular area that is defined by low earthen bank except on the northern side. The eastern half of the interior is bisected by a road on the north – south axis. The possible ringfort in Skeheen Upper has been levelled and there was a possible souterrain in the interior. Some ringforts have associated souterrains, or man-made underground tunnels leading to a chamber or series of chambers.

13.3.3 The Medieval Period

From the Medieval Period, there is a tower house (CO028-009---) in the townland of Castlecooke, situated c. 3km outside the site to the south. The tower house is listed as a protected structure in the Cork County Development Plan, 2003 and assigned the number 00121. Tower houses were built in the 15th and 16th centuries to function as lordly residences for both Gaelic and Norman families. Though not castles, they belong to the same tradition and retain many of the features associated with castles, such

as battlements, machicolations and narrow slit windows. The example in Castlecooke consists of a six-storey rectangular tower. It was a Condon castle originally named Dun Gallane, which later passed to the Cooke family in the 18th century.

From the Post Medieval Period there is a Church of Ireland Church and graveyard (CO028-00801- and CO028-00802-) in the townland of Castlecooke, c. 3km outside the development. The church and graveyard are situated within the demesne of Castle Cooke country house. The church consists of the fragmentary remains of a rectangular building of coarse sandstone construction, has an 18th/19th century appearance and was probably used as a private chapel for the nearby Castle Cooke country house.

Associated with the church is a trapezoidal-shaped graveyard, enclosed by a stone-faced earthen bank. The site contains only a few headstones, the earliest dating to 1842. Castlecooke Country House (CO028-047---) in the townland of Castlecooke, c. 2.7km from the development site is described by Lewis (1837) as being *'beautifully situated on the Araglyn, in the midst of this extensive and valuable plantations'* (Cadogan, 1998, 338).

Country houses and their demesnes had many associated features such as demesne walls, walled gardens, gate lodges, ornamental towers, tree-lined avenues, tree rings, deer parks and ice houses. The house at Castlecooke was burnt by the IRA in 1921 and the ruin later demolished. Residual demesne features include, mature specimen trees, outbuildings, a gate lodge (dated 1899) and original avenues (Hajba, 2002, 101). There is a mid-late 19th century road bridge (CO028-043---) in the townland of Billeragh West/Coolmoohan/Propoge consisting of three semicircular arches with dressed sandstone voussoirs; Baker's Bridge, situated c. 1.8km to the south of the development, is listed in the Cork Co. Development Plan, 2003 as a protected structure and has been assigned the number 00237.

Within the development there is visible evidence for two cultural heritage sites, both of which are associated with the mill industry. These consist of the remnants of a flax mill and a farmhouse with associated outbuildings. The mill is located in Field 22 (See Fig 2.11.2) in the eastern section of the site, to the east of the Muchnagh Stream.

Food processing industries such as brewing, distilling and grain-milling were an important part of Cork's economy between c.1780 and the 1840s. These industries were located in areas where water, a natural source of power, was readily available to be harnessed and used to operate machinery. There was a downturn in these industries after 1840 and many mills ceased to operate and were allowed to fall into ruin. The rivers that were utilized by the mills also retain features, such as weirs, mill races, mill ponds and cooling pipes, associated with the industry. All that remains of the flax mill in Field 22 are a section of the mill race and the mill pond which has been drained and is obscured by dense vegetation. According to local information the mill went out of use in the mid 19th century. The workers of the mill lived in a small settlement shown as Millstreet on the three editions of the OS maps, c. 700m to the south of the development. Flax was grown in the fields to the west of the mill and the farmhouse

situated, c. 600m to the west of the mill was, according to local information the residence of the mill owners. Both the remnants of the mill and the farmhouse and associated buildings are to remain undisturbed by the development.

13.3.4 Cartographic Evidence for the Site

An examination of the three editions of the OS maps illustrates the changes that have occurred in field layout since the mid 19th century. Although many boundaries have remained the same from the 1st edition (1842), up to the 3rd edition (1934), some fields have been amalgamated and boundaries taken out. The most notable change to field layout is the deep drainage ditch that borders the development to the south. This is absent on the earlier 1st edition map, but evident on the later 2nd edition map (1905).

13.3.5 The Field Inspection

The development consists of 23 fields of which the western section of the site that includes Fields 1-13 are proposed to be developed. Full descriptions of all fields within the Development are given in Appendix 13.2. Two sites of cultural heritage interest were identified during the field inspection. These include a farmhouse and outbuildings in Field 14 and the remnants of a flax mill in Field 22.

During the course of field walking, it was noted that certain fields and areas were Areas of Archaeological Potential. They are as follows;

- Nine fields (2, 3, 4, 5, 7, 8, 9, 10 and 23) that are very wet and overgrown and contain a typical environment in which *fulachta fiadh* may be found (Plate 13.1).
- The area in and around the Muchnagh Stream that runs north to south in the eastern section of the development. Rivers have always been a vital resource and would have encouraged human settlement along their banks and within their drainage areas from prehistoric times to the present. Their channels would have been the focus of much activity such as transport, fishing and trade. Consequently, there is a potential for archaeological finds and features, (for example the mill) associated with rivers, either on their banks or in the riverbeds.



Plate 13.1: Fulacht fiadh type terrain in Field 7

13.4 POTENTIAL IMPACTS

There are two upstanding cultural heritage sites within the development, a mill and a farmhouse. The remnants of the mill are situated in Field 22 at the eastern extremity of the development. This area will not be developed so there will be no impact on the remnants of the mill. Approximately 600m to the west of the mill is a farmhouse which originally accommodated the owners of the mill. The house and associated outbuildings will not be impacted during the development. Consequently, both the house and mill will remain as they are on the landscape.

Seven of the nine fields (2, 3, 4, 5, 7, 8 and 9) that contain an environment in which fulachta fiadh may be found will be impacted by the development.

The predominant type of field boundary within the development consists of hedgerows that are fairly dense in thickness and varied in composition. The majority of hedgerows were planted under the Land Enclosure Act, beginning around 1700 and continuing up to the late 19th century. Despite the demands of modern farming, Ireland has the best remaining hedgerow system in Europe.

The construction work on the development will involve ground preparation including the removal of topsoil in the western section of the site where the development will be concentrated. This construction work would impact on any potential archaeological material that may survive below the ground surface.

Where extensive earthmoving is involved there is always the possibility that archaeological material will be uncovered.

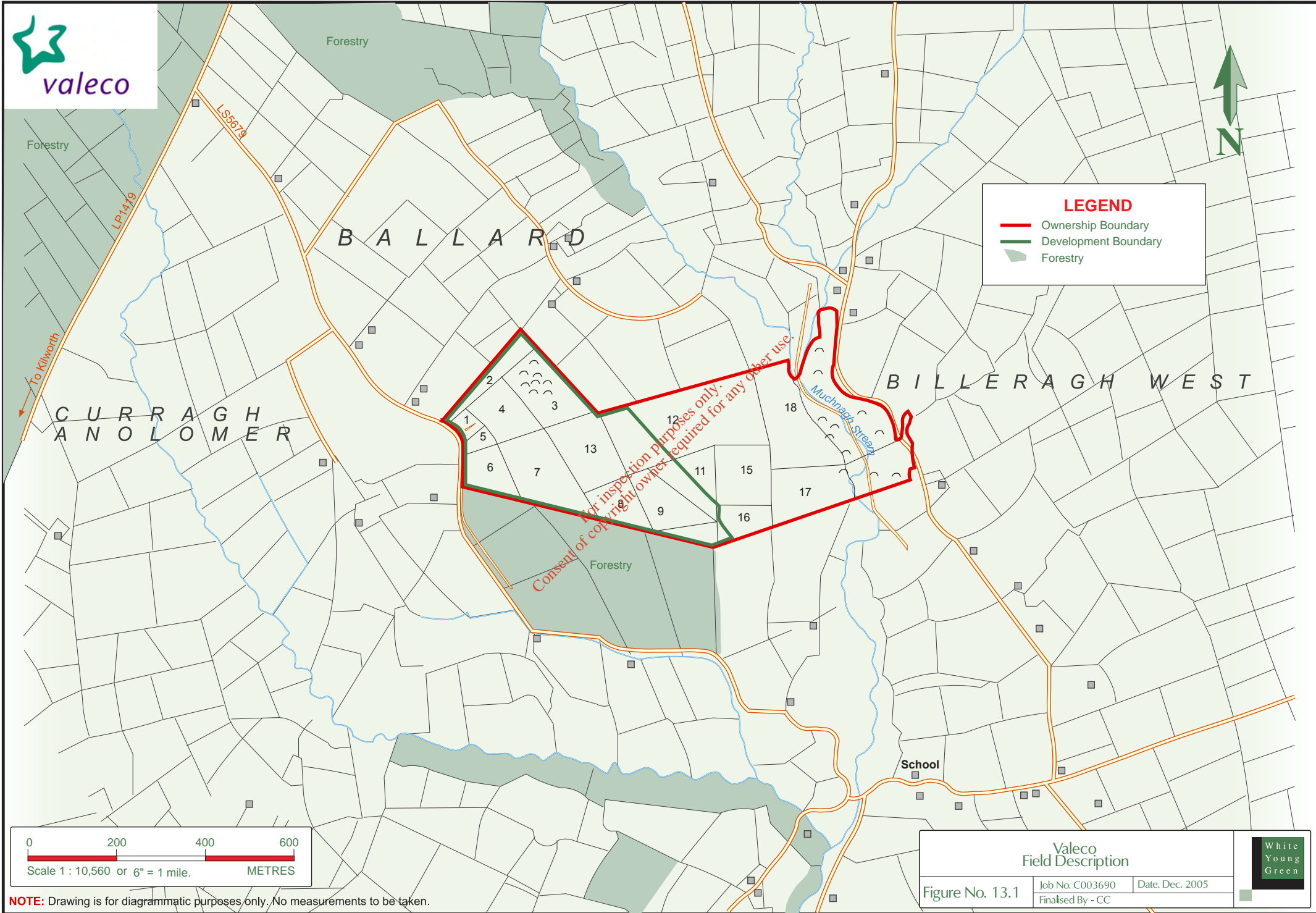
13.5 MITIGATION MEASURES

The construction work on the development site will involve ground preparation work that could impact on any potential archaeological material that may survive below the ground surface. Development on the site is limited to the western section. It is recommended that a programme of licensed archaeological testing be carried out in advance of construction to ascertain if any archaeological remains exist below ground level. Particular attention should be paid to Fields 2, 3, 4, 5, 7, 8 and 9 that have been identified as being Areas of Archaeological Potential. This programme of testing should be agreed with the National Monuments Section of the DoEHLG. In the event of archaeological material being uncovered such material will be fully resolved to professional standards of archaeological practice (Policy Guidelines on Archaeological Excavation – Department of Arts, Heritage, Gaeltacht and the Islands). This work will be funded by the developer.

The farmhouse and associated buildings in Field 14 and the remnants of the flax mill in Field 22 are to remain untouched by the development. Consequently, no mitigation is necessary.

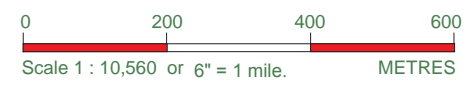
Hedgerows within the development will be maintained where possible.

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LEGEND

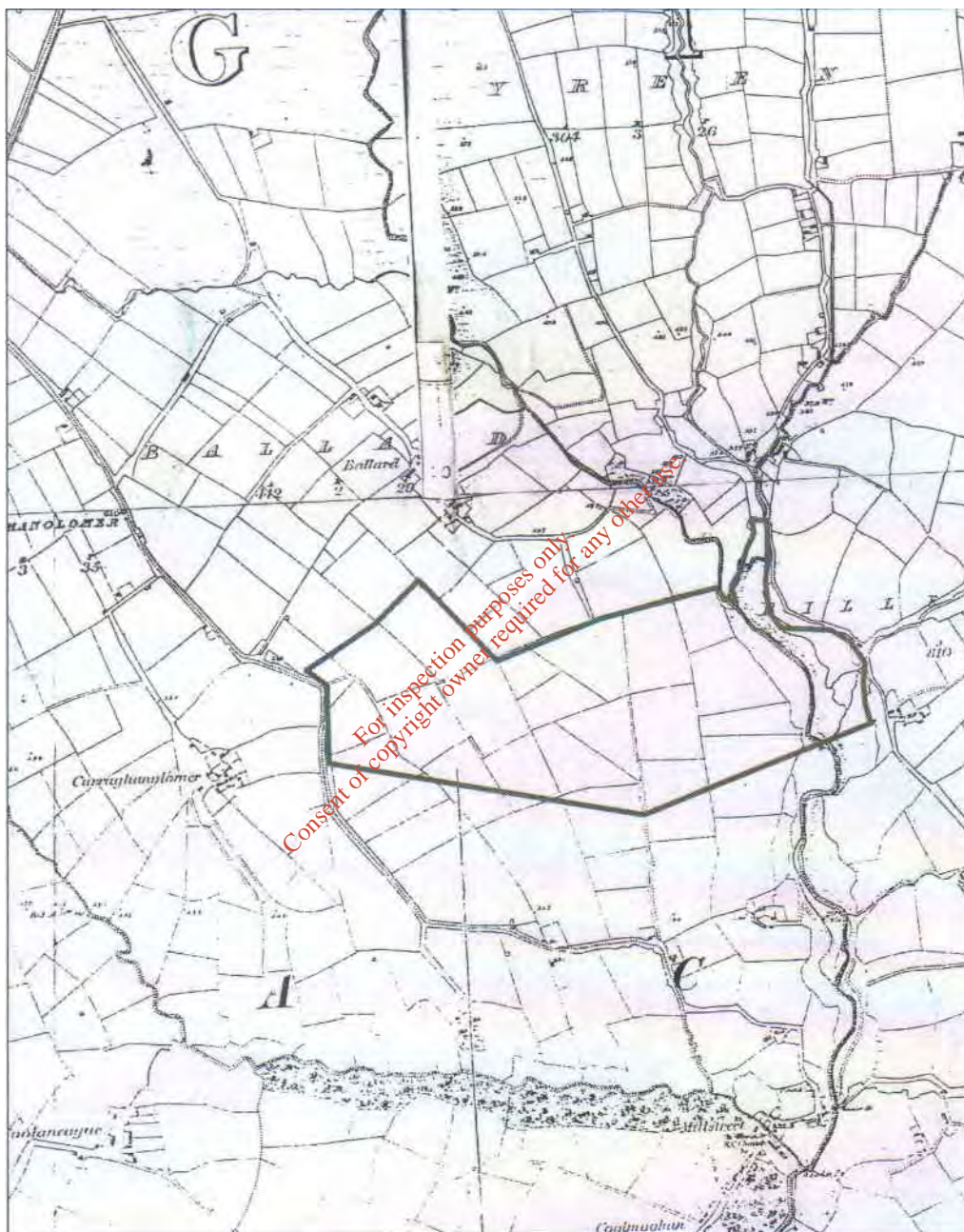
- Ownership Boundary
- Development Boundary
- Forestry



NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.

Valeco Field Description		White Young Green
Figure No. 13.1	Job No. C003690 Date. Dec. 2005	
Finalised By - CC		

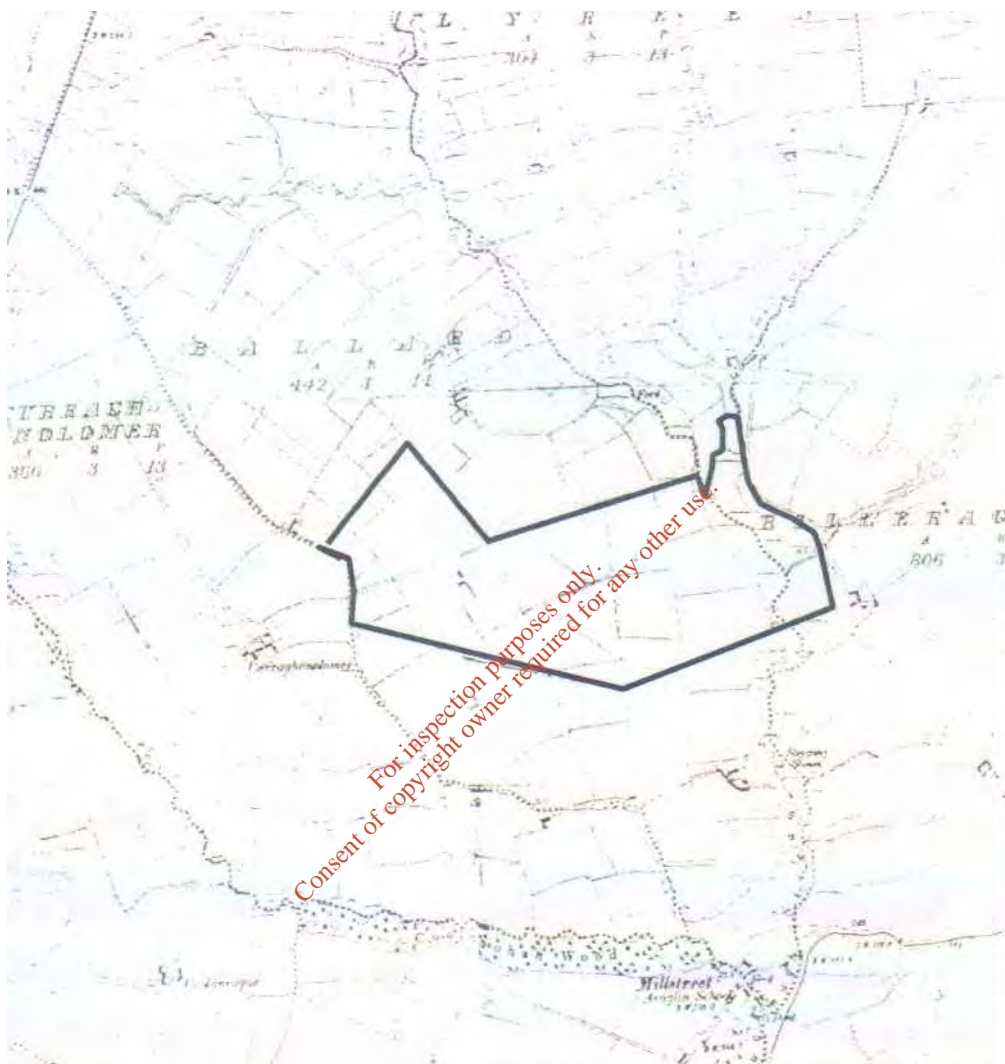
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NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.

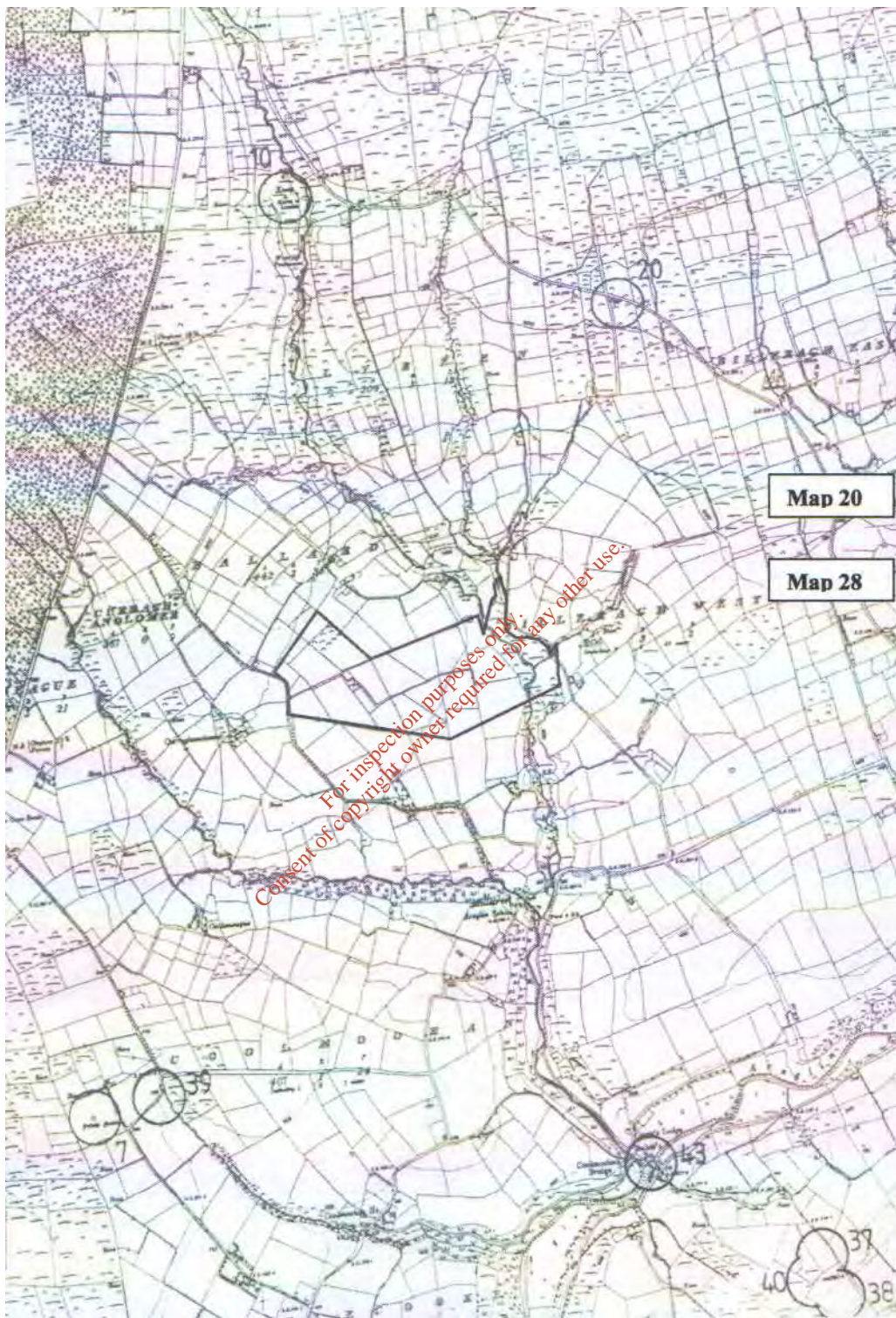
Valeco		
4th Edition OS Map (1842)		
Figure No. 13.2	Job No. C003690	Date. Nov. 2005
	Finalised By - CC	



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Valeco 2nd Edition OS Map (1842)		
Figure No. 13.3	Job No. C003690 Date. Nov. 2005	
	Finalised By - CC	

NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.



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Map 20
Map 28

Valeco 3rd Edition OS Map (1842)			
Figure No. 13.4	Job No. C003690	Date. Nov. 2005	
	Finalised By - CC		

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Appendix 13.1

Details of Published Archaeological Sites within the Study
Area

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Appendix 13.1

Site descriptions of all archaeological sites within a 3km radius of the proposed development area are detailed below. All descriptions are transcribed directly from the Archaeological Inventory of County Cork Vol. IV – North Cork, Parts 1 & 2. The information given in bold is the Inventory number, the townland, the RMP number and the date on which the site was visited.

11817 **Curraghavoe** **CO020-010---** **11/05/1984**

Possible Cairn Not marked on 1842 and 1905 OS maps. Marked on 1936 OS map as rectangular area (15m E-W x 5m N-S) defined by broken line. On W side of Muchnagh stream valley. Area inaccessible due to heavy overgrowth.

12956 **Billeragh West** **CO020-020---** **08/11/1996**

Possible ringfort In pasture, on S-facing slope. D-shaped area (straight side c. 45.7m NW-SE; projecting c. 21m to SW) defined by road boundary on straight side and by earthen bank (ext. H 1.2m) SE□NW; external fosse (D0.2m) survives best SE□SW; internal fosse (D 0.2m) visible to W. Interior raised; heavily overgrown. Disused laneway skirts enclosure to W. Locally known as site of ringfort.

13123 **Lyre** **CO020-022---** **13/01/1997**

Possible ringfort In pasture, on S-facing slope. Roughly circular area (32m E-W; 30m N-S) defined by low earthen bank (int. H 0.38m; ext. H 0.32m) except on N side. East half of interior bisected by roadway on N-S axis. At W side of roadway, rectangular area (20m N-S; 11m E-W), abutting circular enclosure to its N, defined by low bank. Locally known as 'the lios'.

13178 **Skeehen Upper** **CO020-019---** **13/01/1997**

Possible Ringfort In forestry. Depicted as hachured penannular depression (diam. C. 20m), open to SE, on 1936 OS map. Levelled; no visible surface trace. Possible souterrain (13432) in interior.

13432 **Skeehen Upper** **CO020-024---** **13/01/1997**

Possible souterrain In possible ringfort (13178). According to OS Fiedl Memorandum (dated 1931), an underground chamber was discovered here which was entered via winding stairs; 'ancient coins' found within chamber. No visible surface trace.

10184 **Ballinvoher** **CO028-005---** **10/06/1986**

Possible standing stone In pasture, on W-facing slope. Removed; no visible surface trace.

10185 **Ballinvoher** **CO028-006---** **10/06/1986**

Possible standing stone In level pasture. Removed; no visible surface trace.

- 10453** **Castlecooke** **CO028-007---** **10/06/1986**
Fulacht fiadh In rough grazing, c. 70m W of stream. Partially overgrown roughly kidney-shaped mound of burnt material (23m N-S; 30m E-W; H 1.6m); opening (Wth 8m) faces SW.
- 11537** **Propoge** **CO028--037---** **01/11/1996**
Fulacht fiadh In pasture. Grass-covered spread of burnt material (c. 22m NW-SE; 10m E-W). Second fulacht fiadh (11538) c. 150m to S and third (11539) c. 100m to SW.
- 11538** **Propoge** **CO028-038---** **01/11/1996** *Fulacht fiadh*
fiadh In pasture, on N-facing slope. Grass-covered spread of burnt material (16m N-S; 8m E-W). Small patches of burnt material also noted to E. One of a group of three fulachta fiadh (11537, 11539).
- 11539** **Propoge** **CO028-040---**
Fulacht fiadh In pasture, on N-facing slope. Grass-covered spread of burnt material (16m E-W; 7m N-S), truncated on S side by drain and field fence; some burnt material dumped against field fence c. 12m to E. One of a group of three fulachta fiadh (11537, 11538).
- 10454** **Castlecooke** **CO028-039---** **25/05/1996**
Fulacht fiadh In pasture, to W of stream and just N of quarry. Recent digging of passage into field revealed burnt material (D 0.2m) visible in W section at topsoil level. Burnt material, extending westwards into field, is obscured by dumped soil.
- 14706** **Castlecooke** **CO028-00802-** **29/08/1996**
Church of Ireland Church In graveyard (14555). Fragmentary remains of rectangular church, of which only W gable (L 10.2m) with short return on n (L 2.95m) and S (L 1.9m) walls now stand. Built of roughly coursed sandstone. West wall stands to full height with steeply pitched gable: gentle external batter; single central window with two-centred pointed arch; surrounds for ope are masonry, not cut stone. North wall incorporates reused block of late medieval appearance, built into top of wall. Probably private chapel for nearby Castle Cooke country house. Ruin is 18th/19th century in appearance.
- 14555** **Castlecooke** **CO028-00801-** **29/08/1996**
Graveyard In farmland, on gentle E-facing slope, within Castle Cooke demesne. Trapezoidal graveyard (c. 25m E-W; c. 40m N-S) enclosed by stone-faced earthen bank; gate, with stone-built piers, near W end of N side. Interior partially overgrown, planted with mature trees. Ruin of private church (14706) to N of centre. Contains only a few headstones, the earliest dated 1842, and a burial vault, all connected with Cooke Collis family of nearby Castle Cooke (14867).

14867 Castlecooke CO028-047--- 07/09/1989

Country House On W-facing slope, c. 200m W of castle (14345) and steep-sided wooded glen of Araglin River. Burnt in 1921 (Glin *et al.* 1988, 48) and now completely demolished, though ranges of stone-built farm buildings and gate lodge (with datestone of 1899) survive. Described as a 'late seventeenth-century or early eighteenth-century' house (*ibid*), with 'an irregular structure consisting of several gable-ended ranges, with C19 eaved roofs; and a 2 storey projecting gabled porch (Bence-Jones 1978, 64 – photograph there taken from SW). Associated farm buildings (14945) c. 1.5km to SE.

14345 Castlecooke CO028-009--- 20/08/1996

Tower house Atop steep cliff, overlooking Araglin River to E. Six-storey rectangular tower (14.5m N-S; 9.5m E-W) with rounded corners (see plans in Cotter 1994, 42-6). Ground-floor doorway near S end of E wall, guarded by machicolation at parapet level; door surround missing. Short passage inside outer door leads, through pointed-arch doors, N to main ground-floor chamber, W to stairs, and S to guardroom. Unusually large guardroom (5.82m E-W; 1.16m N-S) lit by single slit window in S wall; damaged opening in floor gave entry into unlit vaulted chamber beneath (3.6m E-W; 2m N-S). Main ground-floor chamber (7.7m N-S; 4.6m E-W) lit by slit windows in N and E walls; blocked embrasure in W wall was probably also window; S wall, between chamber and stairs, partially collapsed. Mural stairs lead N from 1st-floor landing to 2nd-floor landing in NW corner of tower; landing lit by slit window with slop-stone in N wall. Spiral stairs rise from here to wall-walk. From 2nd-floor landing, doorway, surrounds missing, leads E to lintelled mural chamber (2m E-W; 1.7m N-S); latter lit by slit window in N wall; garderobe at E end of N wall. From E end of chamber lintelled doorway leads into narrow lintelled chamber (c. 3m N-S; c. 0.6m E-W) in E wall. Badly damaged doorway leads from landing to main 2nd-floor chamber; latter (6m N-S; 5m E-W) lit by windows with single ogee-headed light in deep square-set embrasure, one at S end of W wall, one in centre of E wall. Narrow mural stairs lead up from S side of E window to secondary chamber at S end of 3rd floor. Pointed-arch door in S side of W window leads to secondary chamber (7m E-W; 3.5m N-S) at S end of 2nd floor. Latter lit by windows with ogee-headed lights, in W and S walls, and badly damaged window ope in E wall, light missing; fireplace at E end of N wall missing its arch; chimney flue exists through smoke-hole overhead in E wall. At 3rd floor level a damaged doorway leads E from spiral stairs to mural chamber (5m E-W; 2.2m N-S) in N wall; chamber lit by window with ogee-headed light missing. Chamber covered by pointed wicker-centred vault (long axis E-W). Doorway, surrounds missings, leads S from spiral stairs to lintelled passage which enters main 3rd-floor chamber through N side of W window embrasure. Chamber roofed by wicker-centred vault (long axis N-S); lit by lintelled slit window in E and W walls. Secondary chamber to S accessed only from main chamber on floor below; chamber roofed by pointed wicker-centred vault (long axis E-W), lit by lintelled slit windows in E and W walls. Doorway, surrounds missing, leads from spiral stairs to main 4th-floor chamber; chamber unroofed, most of W wall collapsed; fireplace with flat relieving arch in S wall, possibly inserted; sockets underneath arch indicate missing lintel; central window embrasure in E wall with single ogee-head light. North end of chamber partially obscured by ivy and overgrown rubble; no visible access to garderobe here though evidence on 3rd floor indicated garderobe

shaft extended to this level; likely that this section was originally walled off from main chamber as on floors below. Damaged embrasure at n end of E wall missing light; lower steps survive of blocked stairs which led from N side of this embrasure, probably to walk-walk. Above this level badly damaged doorway gives access from spiral stairs to wall-walk on W side, now largely collapsed; wall-walk on W side now largely collapsed; wall-walk intact on E wall and SE corner, blocked by chimney on the S wall; access to machicolation at S end of E wall; gun loops on each side of machicolation and at N end of E parapet wall. Difficult to interpret N end of tower at this level due to collapse of ivy cover; ledge on N and E walls indicate 5th-floor chamber; window ope high on N wall suggests 6th-floor chamber; arrangement may have been similar to Cloghleagh, where N end rose a further four storeys above main tower. A Condon castle, originally named Dun Gallane, passed to Cooke family in 18th century who built house c. 300m to NW of castle which was burnt 1921 and subsequently demolished.

14805 **Billeragh West/Coolmoohan/Propoge CO028-043---** **10/08/1996**
Bridge Mid-/late 19th century road bridge (Wth 3.85m; long axis NW-SE) over Araglin River. Three semicircular arches with dressed sandstone voussoirs; string course over arches at base of parapet wall; low, stepped, pointed breakwaters on upstream side. Coolmoohan road bridge (Wth 7.55m; long axis NE-SW) c. 50m to NW, over Mucknagh Stream: two segmental arches, SW arch repaired.

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Appendix 13.2

Field Descriptions within the Study Area

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Appendix 13.2 Field Descriptions

A field inspection was made of the development site on the 16th and 18th of February 2005. For ease of reference, each field is assigned a number, from 1- 23 (Fig. 2). The predominant type of field boundary in the area consist of hedgerows. These hedgerows are fairly dense in thickness and varied in composition. They consist of low earthen banks (sometimes stone faced), on which are planted a variety of tress, briars, gorse, fern, and other vegetation. The majority of hedgerows in Ireland were planted under the Land Enclosure Act, beginning around 1700 and continuing up to the late 19th century. Despite the demands of modern farming, Ireland has the best remaining hedgerow system in Europe.

Field 1: Hummocky field in medium pasture with sporadic clumps of rushes, sloping gently down to the S. Hedgerow field boundaries all around. A deep ditch (c. 1m) runs along the N boundary and a road runs to the west of the field. Entrance from the road to the field is through a gateway in the NW corner. A grassed trackway runs E→W along the northern boundary. No cultural heritage features evident.

Field 2: Hummocky field in medium pasture, sloping gently down to the S. There is a marshy area of rushes along the S boundary. Hedgerow field boundaries all around. A grassed trackway runs E→W along the northern boundary. No cultural heritage features evident, although the southern portion of the field contains a typical environment in which fulachta fiadh (Bronze Age cooking sites) may be found. It is therefore considered to be an Area of Archaeological Potential (AAP).

Field 3: Very hummocky field with abundant rushes and boggy underfoot, sloping gently down to the S. Hedgerow field boundaries all around, except at the S, which consists of the driveway to the farmhouse in Field 14. There are deep drainage ditches along the N, W and E boundaries. No cultural heritage features evident, although this field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an AAP.

Field 4: Very hummocky field with abundant rushes and boggy underfoot, sloping gently down to the S. Hedgerow field boundaries all around except for the S, which consists of the driveway to the farmhouse in Field 14. Drainage ditch also along the S. No cultural heritage features evident, although this field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an AAP.

Field 5: Very hummocky field with abundant rushes and boggy underfoot, sloping gently down to the S. Hedgerow field boundaries all around except for the S, which consists of the driveway to the farmhouse in Field 14. Drainage ditch also along the S. No cultural heritage features evident, although this field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an Area of Archaeological Potential (AAP).

Field 6: Medium pasture in the N section of the field. The S section of the field is full of rushes and is boggy underfoot. Boundaries consist of the driveway to the farmhouse in Field 14 along the N; a drainage ditch (c. 2.5m deep) along the S; a road to the W and a high earthen bank planted with palm trees to the E. No cultural heritage features evident.

Field 7: Field in rough pasture, sloping steeply down to the S. The S end is full of rushes and is boggy underfoot. Boundaries consist of the driveway to the farmhouse in Field 14 along the N; a ditch (c. 2.5m deep) along the S; hedgerow along the E and a high earthen bank with palm trees along the W, inside which is a drainage ditch (c. 1.5m deep). The S section of the field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an AAP. If the field is impacted during development, it should be archaeologically tested.

Field 8: Hummocky field of abundant rushes, which is boggy underfoot. Hedgerow field boundaries all around, except at the S where there is a drainage ditch (c. 3.5m deep). No cultural heritage features evident, although this field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an AAP.

Field 9: Hummocky field of abundant rushes, which is boggy underfoot. Hedgerow field boundaries all around. No cultural heritage features evident, although this field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an AAP.

Field 10: Hummocky field of abundant rushes, boggy underfoot. Hedgerow field boundaries all around, except at the S where there is a drainage ditch (c. 3.5m deep). No cultural heritage features evident, although this field contains a typical environment in which fulachta fiadh may be found. It is therefore considered to be an AAP.

Field 11: Gently undulating, medium pasture, sloping down to the S and SE. Hedgerow field boundaries all around with ditches along the E and W. No cultural heritage features evident.

Field 12: Large field of medium pasture, sloping down to the E. There are trucks along the SW and W section of the field. The ground is uneven and hummocky in places and boggy underfoot in sections. Boundaries consist of a laneway running along the S; high (c. 2m) earthen bank (modern) along the W; stream running W→E along the N within a ditch, c. 1.5m deep and hedgerow along the S. Two boundaries running N→S on the rural place map are gone leaving one large field. There are silage bales along the N boundary towards the E end. No cultural heritage features evident.

Field 13: Much of this field has been mechanically excavated and there are deep ponds (quite large in extent) in various sections. There are a few trucks and other machinery also in the field. A trackway runs

N→S along the W of the field. No cultural heritage features evident.

Field 14: This area contains an old farmhouse and outbuildings. According to the landowner, the house was built to accommodate the owners of the flax mill, the remains of which are in Field 22. The house is a three-bay, two-storey, gable-ended farmhouse with slate roof and a chimney at either gable. It is of random rubble construction with some render visible at the front elevation which has replacement windows and door. There is an original one-over-one timber sash window at the rear elevation on the 1st floor. There is a gable ended addition onto the rear elevation. To the N of the house is the farmyard and outbuildings, which are single-storey with random rubble walls that are whitewashed. To the S is a small overgrown garden area, beyond which is an area that has been stripped of grass. There is a waterlogged area to the S and a laneway runs along the E.

Field 15: Gently undulating, medium pasture, sloping down to the S and SE. Field boundaries consist of a low earthen bank with trees along the S; hedgerows elsewhere with ditches along the E and W. No cultural heritage features evident.

Field 16: Hummocky field of medium pasture (shown as three fields on the 3rd edition OS map) with some rushes, sloping down to the S. Field boundaries consist of low earthen bank with trees to the N; a drainage ditch (c. 3.5m deep) to the S and hedgerow to the E and W. No cultural heritage features evident.

Field 17: Undulating field of medium pasture with some rushes. The field slopes gently down to the S, then steeply towards the S end. Hedgerow field boundaries all around except along the N, which consists of a trackway. There is a single gate pier at the NW corner of the field with a small section of stone-wall field boundary showing. No cultural heritage features evident.

Field 18: Field of undulating medium pasture (shown as two fields on the 3rd edition OS map). The field slopes gently down to the S, then steeply towards the S end. A field boundary running E→W on the rural place map is now gone. A section of trackway runs part of the way along the W and all of the S boundary. There is a steep drop down to Field 22 (c). There is a stream running W→E along the N boundary within a ditch c. 2m deep. No cultural heritage features evident.

Field 19: Deep ravine type area, soil has been mechanically excavated in the past and the ground lowered. There is a steep rise (c. 15m) up to Field 20. No cultural heritage features evident.

Field 20: Field in medium pasture, which contains silage bales. Hedgerow field boundaries all around. No cultural heritage features evident.

Field 21: Irregular-shaped area of rough ground to the W of the river. Parts are impenetrable with briars and overgrowth. No cultural heritage features evident.

Field 22: Irregular-shaped area of rough terrain that is very overgrown in places and is impenetrable. A section of a mill race associated with the flax mill is in this field. The mill race runs N→S along the E section of the field. Two sides of the mill race are evident, the walls c. 1.3m apart and c. 1.2m high. There was a millpond situated in the N section of this field, but it has since been drained and is totally overgrown with vegetation. A path runs E→W at the S end of the field. The mill race runs beneath the path and continues on the other side, running south.

Field 23: Very hummocky field of abundant rushes and boggy underfoot. Boundaries consist of a stream along the N and W and a drain along the E and S. There are clumps of briars with overgrown raised areas of earth and stone, probably of recent origin within the field. No cultural heritage features evident, although the S section of the field contains a typical environment in which fulachta fiadh (Bronze Age cooking sites) may be found. It is therefore considered to be an AAP.

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14.0 MATERIAL ASSETS

14.1 INTRODUCTION

This chapter evaluates the impacts, if any, which the development will have on material assets. The assessment of cultural heritage is discussed under Section 13; therefore, this section will evaluate the economic assets only.

Economic assets will be discussed under the following areas including:

- Ownership and access
- Local settlement
- Electricity supply
- Gas Supply
- Road Network
- Water Supply and Usage
- Waste Management
- Site Utilities
- Agriculture
- Tourism
- Military Range
- Natural Resources

14.2 OWNERSHIP AND ACCESS

Valeco Limited, a wholly owned subsidiary of Greenstar intends to apply for full planning permission for the development of a combined waste recovery facility on lands in which the company has an interest in the town land of Ballard, east County Cork.

The proposed facility will be located on an area of c. 17 hectares (42 acres); however the total land which Valeco has an interest in is approximately 32 ha (80 acres).

14.3 LOCAL SETTLEMENT

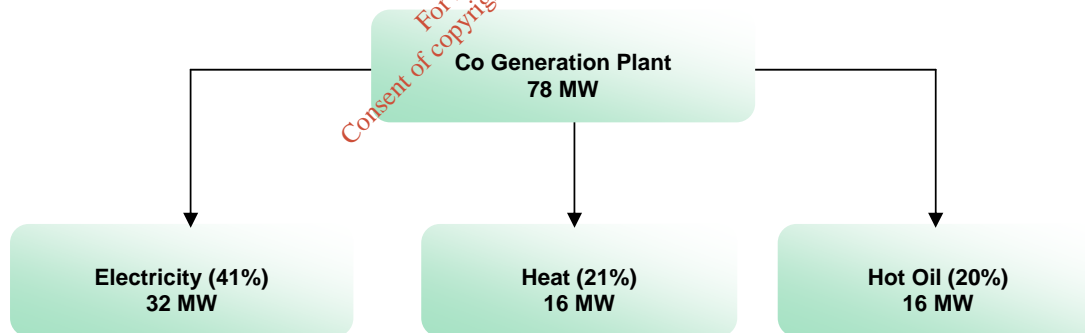
The nearest local settlement to the development is the village of Kilworth in east County Cork, located approximately 6.5km to the south west. The towns of Fermoy and Mitchelstown are also in close proximity to the development and are approximately 11 km south west and 8 km North West of the site respectively. The local settlements are evaluated in detail in Section 3, Human Beings.

14.4 ELECTRICITY SUPPLY

As noted in Section 1, the planned waste recovery facility will combine anaerobic digestion technology to treat non-hazardous organic wastes, generate electrical power and produce a useful solid fertiliser. One of the principal criteria for assessing the viability of this site included an investigation into the proximity to the electricity grid. The site is located close to the 110kV national electrical power grid, which is located approximately 600m west of the site (Figure 14.1).

Part of the process includes the generation of biogas in the digesters and anaerobic filter. The biogas will be converted into electricity, heat and hot oil in the co-generation power house. The surplus electricity will be fed into the national grid, the heat will be partially used to raise the temperature of the incoming waste streams and the hot oil will be used in the band dryer and the Thermal Pressure Hydrolysis (TPH) unit. The intention is that natural gas will be provided as an alternative fuel to cover interruptions in biogas production thus maintaining full capacity operation at all times. Further information regarding the process description is described in Section 2.

Under normal operating conditions at the facility some 12,000m³/hr of biogas will be produced of which approximately 65% is methane i.e. 7,800 m³/hr. In calorific terms this equates to 34 MJ/m³ which is equivalent to 78 MW of energy. It is estimated that the co-generation power plant will generate 32 MW of electrical power, which will be used to power the facility with the excess to be fed into the national grid.



Airtricity has been invited to off take the electricity produced at the site and to sell this energy as green energy to the market. Airtricity is an active renewable energy developer and supplier of electricity in Ireland and has many contracts with public and private businesses.

Connection to the National Grid will be the subject of a separate application which will be conducted by Valeco Ltd. in association with the Electricity Supply Board (ESB). A licence to export electricity through the transmission network will be sought under separate application by Valeco to the Commission for Electricity (CER) Regulation.

14.5 GAS SUPPLY

The natural gas pipeline is located approximately 100m east of the development area and traverses the site within the ownership boundary (Figure 14.1).

Discussions have been held separate to the production of the EIS with Bord Gais regarding the connection requirements for the supply. The natural gas supply will be required as a back up energy source for the heat and power unit. The natural gas will be provided as an alternative fuel to cover interruptions in biogas production. This will ensure that the power production engines will be fully operational at all times

14.6 ROAD NETWORK

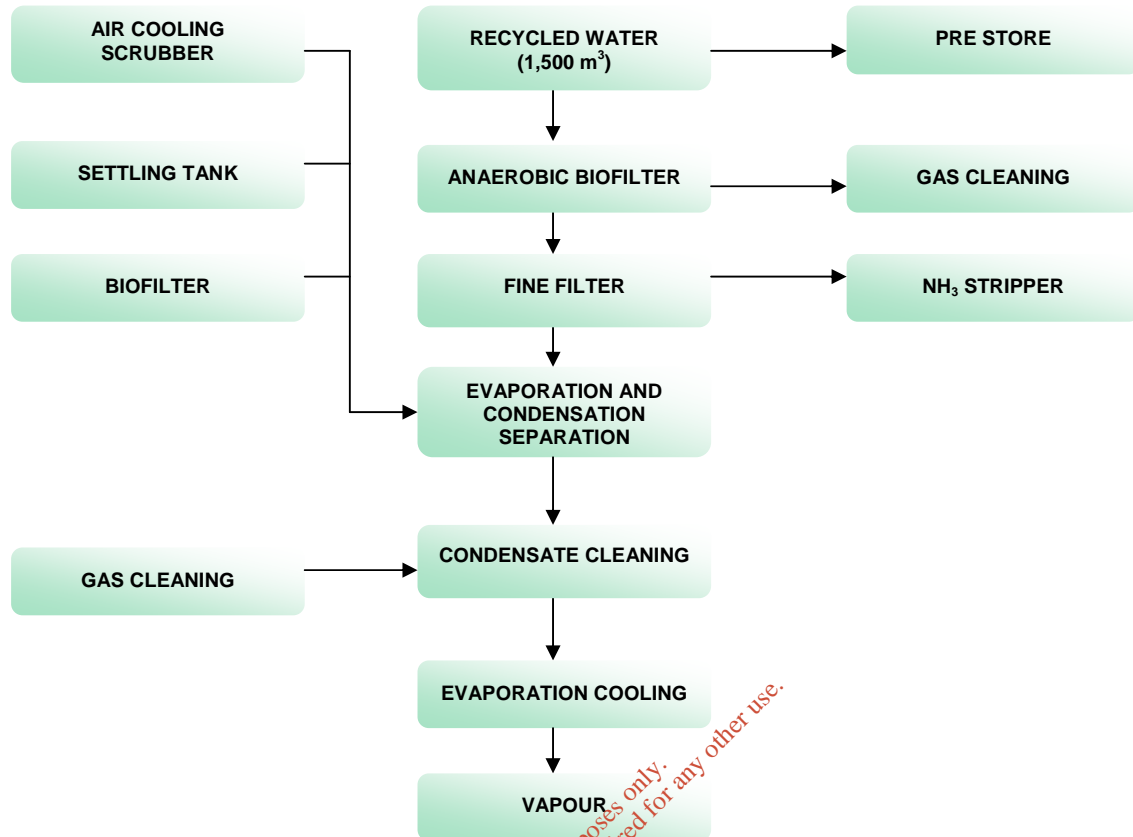
Details regarding the road network are discussed under Section 12, Traffic.

14.7 WATER SUPPLY AND USAGE

14.7.1 Process Water

The proposed facility is designed to accept and treat wastes, some of which have a high water content i.e. slurry, solid manure, food processing waste, dairy waste, abattoir waste, non-risk meat and bone meal and sewage sludge. Due to the high water content of the waste and the type of recycling system proposed, there will be a surplus of water from the process with little or no requirement for water. The recycling water process is illustrated below.

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Any surplus water in the system will be evaporated at the vacuum evaporator, condensate cleaning and the cooling tower. This process water will be evaporated at a rate of 30 tonnes/hour and condensate from the dryer-pelletiser will be evaporated at a rate of 6 tonnes/hour.

14.7.2 Potable Water

Information supplied from Cork County Council indicates that there is one group water scheme within 1km of the site i.e. Ballard Group Water Scheme. An additional three group schemes are located between 2km and 4km from the proposed facility; Macroney Group Water Scheme, Mountain Barrack Public Water Scheme and the Gortnaskehy Public Water Scheme (Figure 14.2).

It is intended that the potable water requirements for the facility will be supplied from dedicated water well or wells drilled on site. At least two wells will be drilled to provide one duty and one standby well. Water will be pumped via an underground water main to the site buildings and will be treated, if required, to ensure potable quality.

As outlined in Section 9 it is considered that the future potential for groundwater development in the area, especially down gradient of the site will not be affected.

14.7.3 Fire Water/ Water Storage Tank

The site will have two dedicated fire water control tanks located in the administration area of the proposed facility. The fire water control ponds will have capacities of 1,500m³ and 4,500m³ respectively and these will be regularly maintained so as to be available for fire fighting at all times.

14.7.4 Foul Water

The water drainage from the hardstanding areas surrounding the tank farm in the process area (and internal floors), water from the biofilter, waste water from the truck wash and sewage effluent from all buildings will be directed to a dedicated foul water collection system and discharged to a settlement tank via an oil interceptor and silt trap.

Sludge from the settlement tank will be pumped on a weekly basis to the waste reception line for introduction into processing. Water from the settlement tank will be continuously pumped to the evaporator/separation unit. Further details of the proposed foul water management system are provided in Section 8.

14.7.5 Surface Water

Details of the proposed surface water management system are described in Section 8, Surface Water.

14.8 WASTE MANAGEMENT

14.8.1 Construction Phase

Disposal of waste during the construction phase is described in Section 15 Construction.

14.8.2 Operational Phase

Provisions for the installation of refuse collection bins will be provided on site where necessary. Domestic waste generated on site from canteen areas etc will be recycled where appropriate and where disposal is required this will be conducted by Greenstar. Any hazardous waste generated on site including oils, batteries, paints etc will be sent to an Environmental Protection Agency approved waste disposal company for appropriate disposal/ recovery.

The operation will not generate any waste by products from the process, but will produce a useful solid fertiliser (see Section 14.9 for further details). During facility start up, close down, emergency or cleaning operations, non-hazardous organic wastes will need to be removed from storage tanks and/ or anaerobic digesters. This waste will be recirculated into the proposed system as feedstock.

14.9 SITE UTILITIES

Some site utilities will require connection and upgrading for the development of the facility. As detailed in Section 14.4 connection to the National Grid will be required and is being dealt with by Valeco Ltd. and the ESB under a separate application procedure. A licence to export electricity through the transmission network will also be obtained from the CER, which will also be sought under separate application.

Connection to the gas pipeline is also required and will be dealt with by Valeco and Bord Gais under a separate application procedure.

Foul water generated at the facility will be recirculated into the proposed system as feedstock. All storm waters will be controlled as detailed in Section 8, Surface Water.

14.10 AGRICULTURE

As noted in Section 1 the proposed facility will be located on an area of approximately 17 ha; however the total land in which Valeco has an interest in at this location is approximately 32 ha (80 acres). The proposed development will be constructed on Valeco Limited lands only and not on any other agricultural land. A statistical farm survey, which would evaluate land take or severance factors, was therefore not required.

Historically, the site has been used in the sludge handling business since 1990. In August 1998, planning permission was granted by An Bord Pleanála for the collection of biosolids from industries in the general Munster area, the blending of these wastes and the use of the blended product as an agricultural fertiliser.

The proposed 1998 facility permitted sludge storage in 8 No. 7.2 m high tanks, on the 3 hectare site and permitted an average of 60 traffic movements daily i.e. 30 loads in and 30 loads out of the facility. The facility did not develop to its full capabilities as permitted under An Bord Pleanála consent but has been used continuously since 1998 for the storage of organic wastes.

While the proposed 1998 facility did not proceed, the planning approval granted by An Bord Pleanála gave permission for the acceptance of approximately 30,000m³ per year of organic wastes from the same agricultural businesses and chemical industries that will supply the proposed combined waste and power facility.

14.11 TOURISM

Tourism is discussed under Section 3, Human Beings.

14.12 MILITARY RANGE

Kilworth camp is located approximately 2km from the development, which is used by the Southern Command of the Defence Forces.

14.13 THE USE OF NATURAL RESOURCES

In so far as possible, construction materials will be from local sources and all imported material that will be used on site will be from approved sources. Further details regarding the construction of the development are outlined in Section 15.

14.14 MITIGATION MEASURES

As Valeco has an interest in all the lands proposed for the development, the proposed facility will not result in any significant environmental impacts relating to land severance, land access or disruption to current agricultural land use.

The application to connect the national grid, to export electricity through the transmission network and to connect to the gas pipeline will be obtained from the ESB, CER and Bord Gáis under a separate application. Valeco confirmed that any environmental conditions specified by the above contracts will be adhered to.

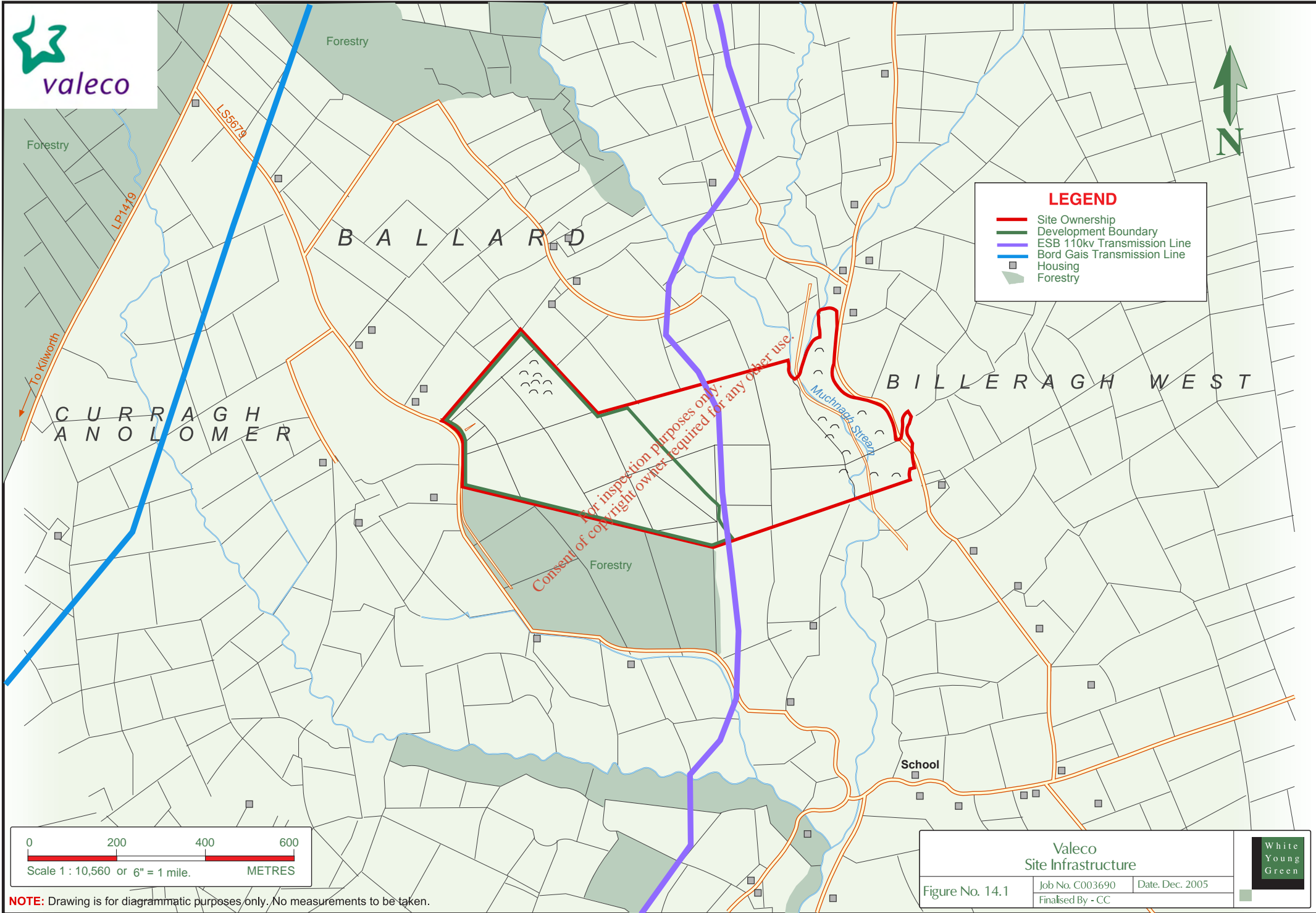
Impacts and specified mitigation measures regarding surface water, groundwater/ hydrogeology local settlement, tourism and road network are detailed in Sections 8, 9, 11 and 12 respectively.

Waste management on-site will be conducted in accordance with best practice to encourage as much segregation and recycling on site. Any waste removed from site will be by carriers in receipt of valid waste collection permits and to disposal facilities approved by the EPA.

The site is located approximately 2km from the Kilworth Military camp and will not result in any disruption to ongoing activities.

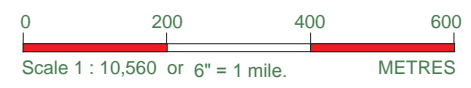
14.15 RESIDUAL IMPACTS

With the above mitigation measures in place, neither the construction nor operational phases of the proposed development will result in any significant negative impacts on the existing economic assets.



LEGEND

- Site Ownership
- Development Boundary
- ESB 110kv Transmission Line
- Bord Gais Transmission Line
- Housing
- Forestry

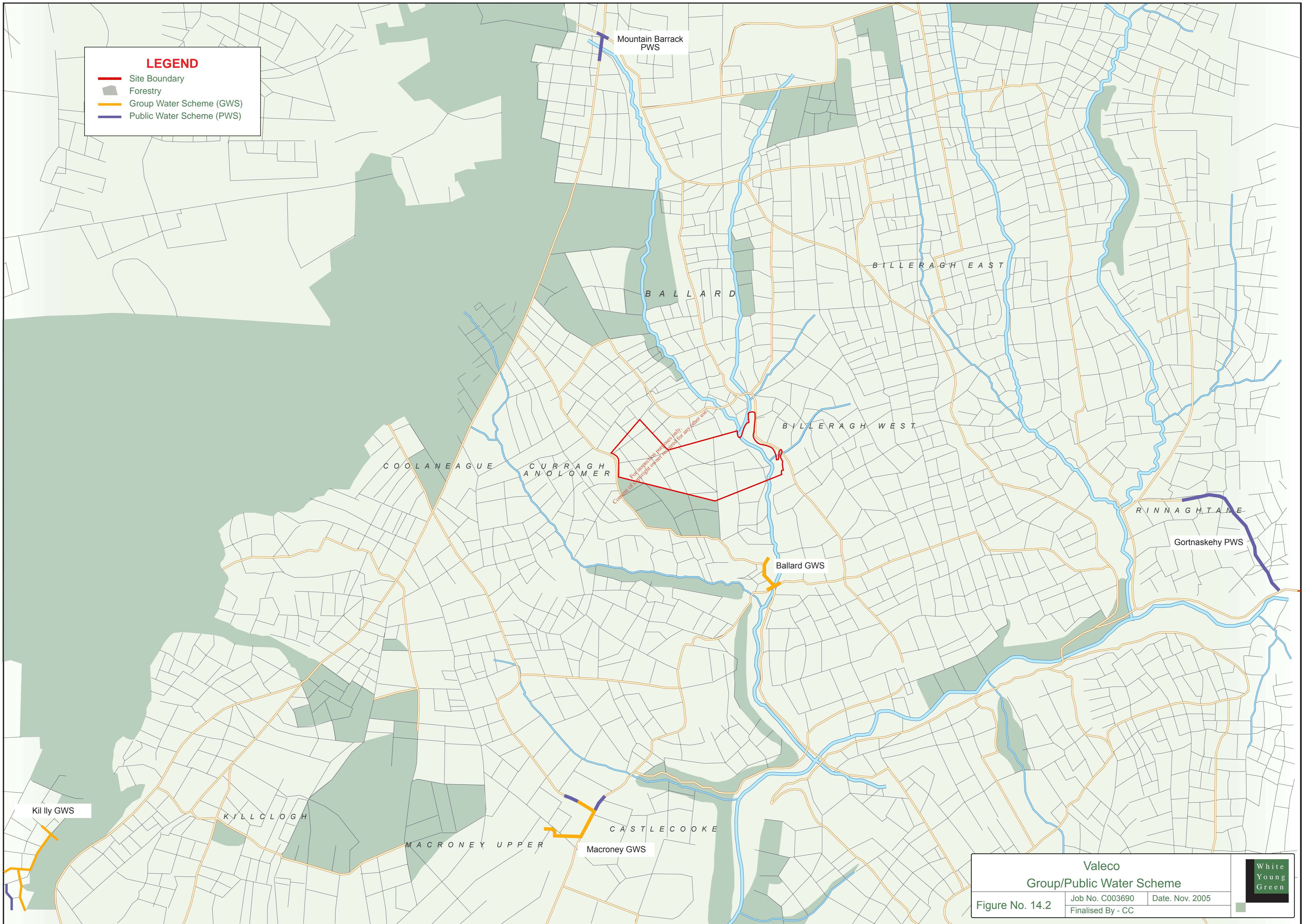


Valeco
Site Infrastructure

Figure No. 14.1	Job No. C003690	Date. Dec. 2005
	Finalised By - CC	

White Young Green

NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.



LEGEND

- Site Boundary
- Forestry
- Group Water Scheme (GWS)
- Public Water Scheme (PWS)

Valeco			
Group/Public Water Scheme			
Figure No. 14.2	Job No. C003690	Date. Nov. 2005	
	Finalised By - CC		

15 CONSTRUCTION

15.1 INTRODUCTION

This section details the construction works required for the proposed facility and indicates the mitigation measures to be implemented to ensure that potential environmental impacts are minimised.

15.2 SITE EVALUATION

Original site evaluation and testing of the site was completed in the application for a waste management facility for which planning permission was granted on the 21st August 1998 (Reference PL 04.105720). General infrastructural construction will require additional geotechnical investigations such as trial pits and C.B.R. tests to verify foundation designs and road construction. All investigations required prior to enabling works shall be carried out in accordance with BS 5930 (Code of Practice for Site Investigations) and site specific site investigation specifications based on the findings of the previous initial site investigation works.

15.3 DURATION AND PHASING

The timing of the commencement of construction is subject to planning, licensing and ecological constraints. It would be expected, that any works associated with site clearance and removal of hedgerows would be seasonally limited to mitigate against any adverse ecological affects.

The works to be conducted will be developed in three phases. The excavations and the grading of the site and landscape bunding and planting will be completed during Phase 1. Such site preparation works are expected to be 4-6 months. The construction of the buildings, roads, drainage, infrastructural works and fire control ponds will be constructed in Phase 2. It is anticipated that these works will be undertaken in an 18 month period. The installation and testing of mechanical and electrical equipment will be installed during Phase 3. It is anticipated that the duration for the installation and testing of Phase 3 will take approximately 6 months.

It should be noted that the above is indicative only and may be subject to variations on consent from Cork County Council.

15.4 SITE PREPARATION

Site Acquisition, Clearance and Management Prior to Construction.

There are no areas of land to be acquired prior to construction, as the applicant is in possession of the entire area bounded by the red line as illustrated in Figure 1.2. The site clearance process will not commence until the main construction contract is awarded.

Site Preparation Works

Site preparation works will be required in order to facilitate the proposed development. Such works will involve the re-grading of the south eastern margin of the site to approximately 10 metres below the adjacent waste acceptance/administration area to house the digester/storage area. The excavation of this area will require the construction of retaining walls to support the surrounding lands. It is anticipated that the materials from the excavation works will be incorporated into the screening berms which surround the entire site. Some regrading works will also be required for the waste acceptance/administration area located to the north of the proposed facility. All regraded areas will be interconnected by a series of ramps.

Site preparation works will also include the site set up by the contractor which will include the following:

- Site Office
- Site Facilities (canteen, toilets etc.)
- Office for Resident Engineer
- Secure compound for the storage of all on site machinery and materials
- Carparking
- Permanent/temporary fencing
- Site Security

15.5 PLANT

Equipment to be used during the construction of the facility will be typical of a project of this scale. In general the following machinery will be used:

- Tracked excavators
- Dumper trucks
- Tracked and wheeled excavators
- Fixed tower and mobile crane
- Teleporters
- Delivery vehicles for concrete and materials

15.6 EMPLOYMENT

Employment levels across the project will vary depending on the program and the extent of activities occurring on the site. It is expected that during peak activities, there will be between 50 and 100 persons working directly on the construction site.

15.7 ACCOMMODATION/FACILITIES

The relevant statutory requirements will be provided for all workers on the construction site including:

- Canteen facilities and drinking water supply
- Toilet, wash up and locker facilities and hot water
- Drying room
- Car parking for workforce
- First Aid Office
- Site Engineers & Resident Engineers offices
- Site offices for Contractors
- Secure site compounds

15.8 CONSTRUCTION OPERATION HOURS

Subject to being conditioned by planning requirements, it is anticipated that the following will be the working hours on the construction site.

- Monday to Friday 8 am to 6 pm
- Saturdays 8 am to 1 pm
- Site closed on Sundays
- Site open on Bank Holidays as per Saturdays

Working hours may vary slightly depending on weather conditions and daylight hours during winter months. Heavy construction activities will be avoided where possible outside the normal working hours outlined above.

15.9 CONSTRUCTION TECHNIQUES

The construction techniques used will be standard and similar to those that would normally be associated with a large infrastructural project with both a building work element and a large civil engineering element.

15.10 MATERIALS

In so far as possible, construction materials will be from local sources. All imported material that will be used on site will be from approved sources.

15.11 PIPE/DRAINAGE WORKS

The construction of the foul and surface water systems will be a significant element of the project. The infrastructural drainage works will occur in tandem with the overall development the buildings.

Drainage for the roadways will be constructed first as the permanent internal roads will also be used as routes for construction traffic. Temporary settlement ponds and interceptors will be constructed during the initial stages of the contract mitigating against adverse impacts on the existing drainage network.

15.12 EXTENSION OF INFRASTRUCTURE

Services such as ESB and Telecom will be brought to the dedicated construction compound from the nearest available point. Water for the development will be supplied from on site wells. Temporary sanitary accommodation will be provided on site. All domestic effluent generated on site will be discharged to temporary sewage containment facilities prior to transport and treatment off site.

15.13 WASTE MANAGEMENT

During the construction phase both solid and liquid waste will be produced at the facility. Minor quantities of liquid waste will be produced during the construction phase of the facility. Waste oils, solvents and paints will be stored in a temporary bunded area prior to transport off site by a licensed contractor. During the construction phase all domestic effluent generated on site will discharge to temporary sewage containment facilities prior to transport and treatment off site by an authorised contractor.

It is not envisaged that there will be any spoil materials arising from the construction as all the excavated soil will be re-used as part of the construction process. All solid waste generated during the construction phase will be adequately segregated and stored prior to transfer to an authorised facility for recovery/recycling/disposal.

15.14 FENCING AND SECURITY

It is intended to locate a site security hut and controlled access gates at the new entrance road as shown on Figure 15.1 which will be manned during working hours. During construction temporary fencing will be erected around building compound for the storage of all on site machinery and materials.

15.15 NOISE, VIBRATION AND DUST

Dust emissions during the construction period have been detailed under temporary environmental protection measures. Baseline and proposed noise and vibration emissions have been presented in Section 5.

15.16 TEMPORARY ENVIRONMENTAL PROTECTION MEASURES

During the construction stage a temporary wheel wash will be located along the access road to the facility prior to the commissioning of the permanent wheel wash as detailed in Section 9. Site construction roads will be sprayed with water during dry periods to mitigate against the formation of dry dust particles.

The movement of excavated materials on site may lead to the formation of airborne dust particles during dry weather periods. The use of water suppressants will be used during these dry weather conditions.

The screening berms proposed for the facility will be constructed and planted at the earliest opportunity thus limiting the potential for off site migration of airborne dust. Where temporary stockpiles are required the material will be stored in designated areas and will be covered with tarpaulins and/ or regularly dampened during dry weather periods.

All potentially polluting substances such as oils, chemicals and paints used during construction will be stored in designated storage areas which will be bunded to a volume of 110% capacity of the largest tank/container within the bunded area with all filling and draw-off points will be fully located within the bunded area. Drainage for the bunded area will be diverted for dedicated collection and safe disposal.

As stated above all domestic effluent generated on site will be discharged to temporary sewage containment facilities prior to transport and treatment off site.

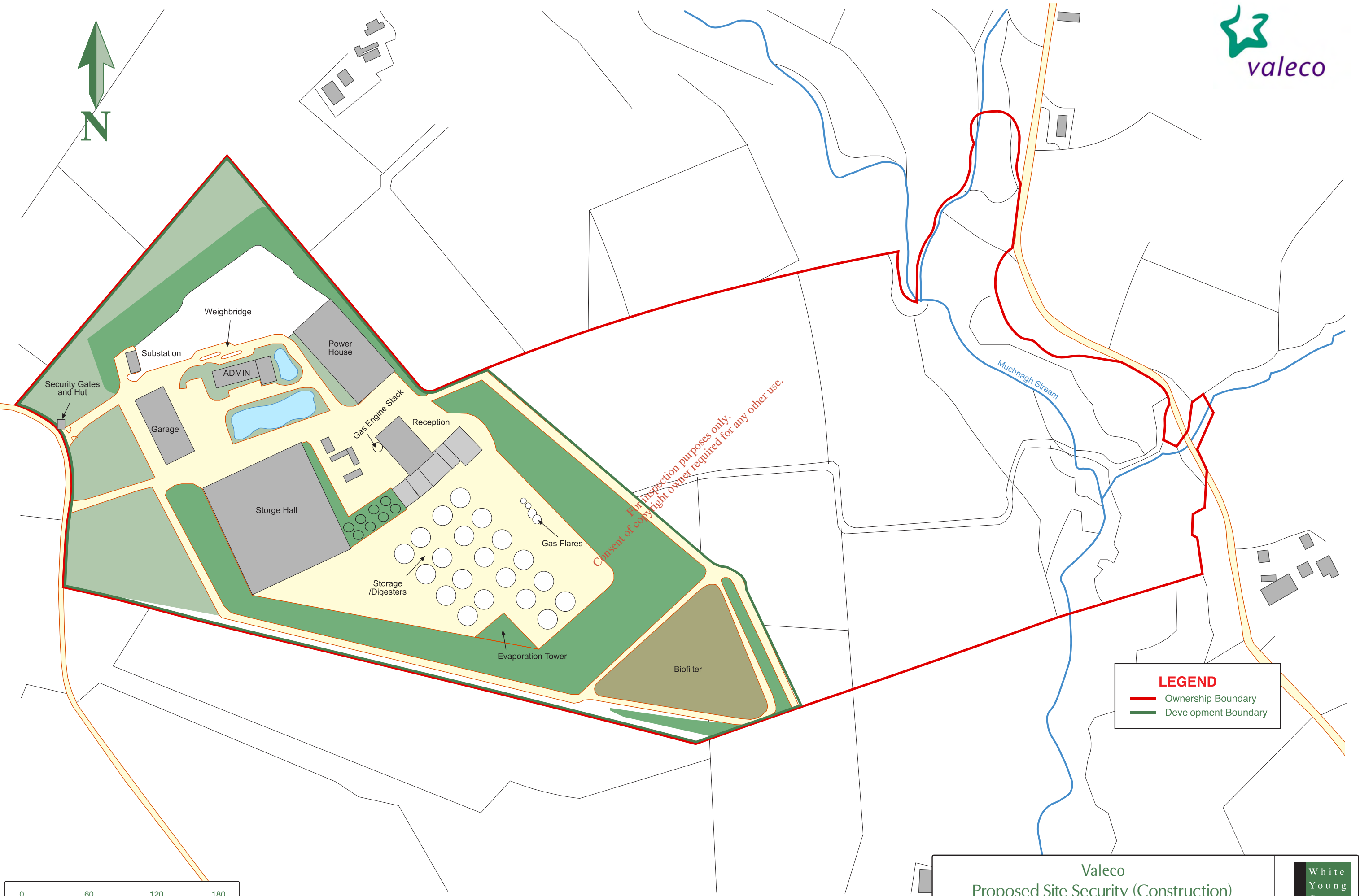
Temporary settlement ponds and interceptors will be constructed as necessary during the early stages of construction mitigating against silt laden run off to the existing drainage network.

15.17 POTENTIAL IMPACTS

Prior to commencement of development a construction quality assurance plan (CQA) will be jointly prepared by the contractor and the developer. Written approval of the CQA will be sought from the planning authority prior to site development.

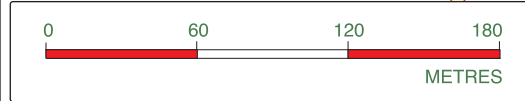
Good housekeeping and facility management during the construction period will ensure that there will be no negative environmental impacts from the construction of the proposed facility.

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LEGEND

- Ownership Boundary
- Development Boundary



NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.

Valeco Proposed Site Security (Construction)			
Figure No. 15.1	Job No. C003690	Date. Nov. 2005	
	Finalised By - CC		

16 INTERACTIONS

In accordance with the requirements of EC Directive 85/337/EC (as amended) and Environmental Protection Agency (EPA) "Guidelines on the Information to be contained in Environmental Impact Statements" and "Advice Notes on Current Practice in the Preparation of Environmental Impact Statements", published in 2002 and 2003 respectively, the interactions between various environmental factors was completed as part of the environmental impact assessment.

The impacts and likely significant effects on the interaction between any of the following environmental media is discussed below:

- Human beings
- Flora and fauna
- Soils and groundwater
- Surface water
- Air
- Noise
- Climate
- Material assets and
- The landscape

Table 16.1 presents a matrix of interactions likely to occur from the proposed development (highlighted in green). The level of interaction between the various media will vary greatly but the table allows the interactions to be identified and detailed where necessary. If the development does not have the potential to impact or affect the interaction then that interaction is not highlighted in Table 16.1.

The interaction matrix is based on the potential interrelationships of the environmental media both during the construction and Operational Phases of the proposed development. Details of individual interactions and a discussion of the interaction are presented in Table 16.2.

Table 16.1 Interactions between Environmental Media

	Human Beings	Air	Noise	Landscape	Flora & Fauna	Surface Water	Soils & Groundwater	Climate	Material Assets
Human Beings									
Air									
Noise									
Landscape									
Flora & Fauna									
Surface Water									
Soils & Groundwater									
Climate									
Material Assets									

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 Interactions likely to occur between Environmental Media
 Interactions not likely to occur between Environmental Media

Table 16.2 Discussion of Interactions

Media	Interaction	Discussion
Air	Human Beings	During the construction phase, the main potential impacts on air quality arise due to the generation of dust and the movement of construction traffic at the site. The dispersion modelling assessment has shown that the significance of the effect of emissions from the proposed development is negligible. Odours will be imperceptible at the nearest sensitive receptors. For all other pollutants modelled, the increase in predicted concentrations is significantly less than the air quality standards.
	Flora & Fauna	Dust and potential emissions from the process could affect flora and fauna. Air quality in the vicinity of the proposed development will be maintained below regulatory air quality standards.
	Surface Water	Dust from the proposed development could affect surrounding watercourses. Air quality in the vicinity of the proposed development will be maintained below regulatory air quality standards
	Soils & Groundwater	Generation of dust during excavation works could affect air quality in the vicinity of the proposed works. Mitigation measures as outlined in Sections 5 and 15 will ensure dust emissions are within that regulated by the EPA.
	Material Assets	Generation of dust during excavation works could affect agricultural practices in the vicinity of the proposed works. Mitigation measures as outlined in Sections 5 and 15 will ensure dust emissions are within that regulated by the EPA.
Noise	Human Beings	Sensitive receptors located in close proximity to the proposed development could experience an increase in noise. All noise emissions from the facility will be maintained within regulatory requirement.
	Flora & Fauna	Noise emissions during construction works could impact on birds currently using the site. Mitigation measures outlined in Section 10 will ensure that there is no significant impact on birds within the vicinity of the site.
	Material Assets	Cattle and other sensitive animals are sensitive to sudden noise impacts which may be associated with the construction phase of the proposed development. Valeco will discuss the schedule of construction works with adjacent landowners to allow movement of such animals prior to any such sudden events.

Media	Interaction	Discussion
Landscape	Human Beings	The proposed development comprises a significant development within a rural landscape. Its construction and early operation will result in localised negative landscape and visual impact. The development will permanently alter the character of its immediate setting, it will not impact adversely on sensitive, vulnerable or designated landscape aspects.
	Flora & Fauna	Restoration of landscape by early planting will be a requirement. Use of species typical to the locality will be required.
	Soils & Groundwater	Movements and stockpiling of soil during the construction phase has the potential to impact on the landscape. This will be temporary in nature.
	Material Assets	Cultural features have landscape significance and are taken into account in the landscape/visual assessment where appropriate.
Flora & Fauna	Human Beings	The impact to flora and fauna related to habitat loss and dislocation. Mitigation measures outlined in Section 10 will ensure that such impacts are minimal.
	Surface Water	Water quality and quantity is an important factor to flora and fauna especially in the Muchnagh Stream. Mitigation measure outlined in Sections 8 and 15 will ensure that there is no significant impact on either water quality or quantity in the vicinity of the proposed development.
	Soils & Groundwater	The creation of berms could alter the habitats and pathways of fauna. The mitigation measures outlined in Section 10 will ensure that such impacts are minimal.
	Climate	Flora lost during the construction phase of the proposed development will result in greater temperature gain in the immediate vicinity of the exposed soils. This will be temporary in nature. Early planting will be a requirement of the landscape plan.
	Material Assets	Land take for the proposed development will cause some localised loss to terrestrial fauna.
Surface Water	Human Beings	Mitigation measures outlined in Sections 8 and 15 will ensure that there will be no significant impact on surface water quality or quantity within the vicinity of the proposed development. The proposed development will not alter the existing drainage network, therefore there will be no potential for flooding of adjacent lands.
	Soils & Groundwater	Run-off from during the construction phase has the potential to be silt laden and therefore affect the surrounding watercourses. Mitigation measures outlined in Section 15 will ensure that run off during the construction period will be controlled.
	Material Assets	The Muchnagh Stream is an important amenity to the locality in terms of fishing etc. Mitigation measures outlined in Sections 8 and 15 will ensure that the proposed facility will not impact on its current use.

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Media	Interaction	Discussion
Soils & Groundwater	Human Beings	Dust from construction works has the potential to give rise to nuisance. Mitigation measures proposed in Section 15 will insure such nuisance does not occur.
	Material Assets	Excavation, movement and placing of soils during the construction period will have an energy requirement.
Climate	Material Assets	Ireland is required, under EU Directive 2001/77/EC, to increase electricity produced from renewable energy sources from a level of 3.6% in 1997 to greater than 13.2% by 2010. The operation of the proposed facility will contribute to the production of electricity to reduce both the reliance on imports and exposure to international markets as well as reducing damaging emissions to the atmosphere.
Material Assets	Human Beings	Current land use will be permanently altered.

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