Appendix A

Detailed Financial Appraisal

A1 Introduction

As part of the process of preparing the Area Action Plan, Arup have carried out a detailed financial appraisal of both the preferred design option, and a number of variations.

In applying a financial model, estimates have been made about the likely costs of the development, and the likely level of revenue arising from sales of new dwellings, and commercial property. Assumptions underpinning the financial appraisal are detailed in Section A2.

Using these key cost and revenue estimates, and key assumptions, the Preferred Options Base Scenario and a number of variations have been modelled to help inform the selection of definitive, final Preferred Options. Financial appraisals for the Preferred Options Base Scenario and the variations are set out in Section A3.

A2 Key Cost and Revenue Estimates and Key Assumptions

In order to prepare accurate financial appraisals, a number of assumptions have been made about both the probable costs and likely levels of revenue associated with the Preferred Options Base Scenario and its variations. These are set out in some detail in this section, and have been agreed by South Lakeland District Council in consultation with the AAP consultant team.

A2.1 The Nature of the Development

Overall, the Preferred Options Base Scenario would deliver a development that includes some 539 new dwellings, new business premises, new retail premises and a hotel. The new homes consist of 383 apartments and 156 houses. There would also be a number of residential moorings provided along the canal.

A2.1.1 Tenure and Property Mix

The Council require there to be a 70 / 30% split between market / affordable homes within the Canal Head AAP development.

Consequently, of the 539 proposed new dwellings in the preferred option, 162 would be affordable housing and 377 would be market housing for sale.

Within the affordable housing, the Council have specified that 75% of the affordable dwellings should be below market sale or shared equity properties, and 25% should be RSL properties for social rent.

Furthermore, the Council have a detailed set of specifications on the mix of property types within the affordable housing, based upon current and projected housing need in the District. 70% of the affordable homes are required to be houses, and 30% to be flats. The Council also makes a distinction between lower quality and higher quality affordable homes (below market or shared equity properties).

Finally, given market conditions, it is assumed that developers would wish to build 2 bedroom apartments in greater numbers than 1 bedroom properties. Consequently, within the market apartments, it is assumed that 75% would be two-bedroom properties and 25% would be smaller, one-bedroom, properties.

Table A1 shows the property mix that would be provided under the Preferred Options Base Scenario

Table A1: Preferred Options Base Scenario Property Mix by Tenure

Market Housing	Affordable Sale / Shared Equity	RSL
84 x 1 bedroom flats	12 x lower quality 1 bedroom flats 6 x higher quality 1 bedroom flats	6 x 1 bedroom flats
251 x 2 bedroom flats	12 x lower quality 2 bedroom flats 6 x higher quality 2 bedroom flats	6 x 2 bedroom flats
21 x 2 bedroom houses	29 x lower quality 2 bedroom houses 14 x higher quality 2 bedroom houses	14 x 2 bedroom houses
21 x 3 bedroom houses	29 x lower quality 3 bedroom houses 14 x higher quality 3 bedroom houses	14 x 3 bedroom houses

A2.2 Costs

The total costs related to the development are composed of several different elements.

A2.2.1 Residential Construction Costs

Residential construction costs of the new dwellings form the largest part of total costs for the scheme. Davis Langdon LLP have provided estimated construction costs for the scheme for the market properties, lower quality and higher quality affordable homes.

Davis Langdon's assumptions are included with this report as Appendix B and the resulting construction costs are included as Appendix C.

It is assumed that RSL properties are built to the same standard as the lower quality affordable market properties – see A2.1.1 above.

Code for Sustainable Homes

Davis Langdon provided costs that take into account the Code for Sustainable Homes, and provide cost estimates for new dwellings to meet Levels 3, 4, 5 and 6 of the code. At present, Davis Langdon feel that Code for Sustainable Homes Level 6 is not achievable and have been unable to provide costs for this level of build.

Consequently, total residential construction costs can be estimated at Code for Sustainable Homes Levels 3, 4 and 5[1].

These figures show a substantial difference between the costs associated with properties built to Code for Sustainable Homes 3 and the higher standards in Levels 4 and 5.

A2.2.2 Developers Profit

Developer's profits are calculated at 17.5% of total costs to include costs of marketi

A2.2.3 Land Acquisition Costs and CPO

Land acquisition costs, especially for residential development, form a considerable proportion of total costs. Acquisition costs for residential land in Kendal is estimated to cost in the region of £2.47m per hectare, this compares to acquisition costs for leisure or retail uses of £1.7m per hectare, and less than £750k per hectare for office or industrial workshop uses.

South Lakes District Council have recently increased the requirements for affordable housing provision. Carigiet Cowan have suggested that a 30% affordable housing requirement may act to lower residential land values by as much as 20-30%. Imposing a *statutory planning charge* (see paragraph 9.2) would also exert a strong downward pressure on residential land values. A significant reduction in the acquisition costs for residential land would have a dramatic effect on the overall financial performance of the scheme, given residential land acquisition costs are more than £16m in the Preferred Options Base Scenario. However, at this stage, no evidence is available to accurately quantify the size of any reduction in land values. Consequently, all the figures provided in this report are based on the £2.47m per hectare figure quoted above.

CPO costs have been estimated at 10% of the total land acquisition costs.

[1] N.B. At present it is not mandatory for homes to meet any of the Code for Sustainable Homes, nor is it mandatory for homes to be even assessed against the code. However, the Government is currently consulting upon making assessment against the code mandatory, and the recent Department for Communities and Local Government Policy Statement "Building a Greener Future" indicates an aspiration for all homes to meet Code for Sustainable Homes level 3 by 2010, level 4 by 2013 and level 6 (zero carbon) by 2016.

A2.2.4 Demolition Costs

Many of the existing buildings within the AAP area will need to be demolished; these demolition costs are estimated at £322,300 per hectare.

A2.2.5 New Substation

United Utilities (UU) have confirmed that the demand on the primary electricity network in Kendal is just below its maximum capacity with around 1MVA available. It is thought that incremental load growth over the next few years would see this reduced further. Outline plans are in place to undertake 33kV reinforcement around 2014; however this would be brought forward if further connection applications exceeded current primary capacity. An approximate programme to implement such reinforcement would be in the region of 18 months, depending on lead times for major items of plant. UU have advised us that, based on a development capacity of 3.5MVA, the development would be expected to make contribution towards any reinforcement costs in the region of £100k.

A2.2.6 Additional Fees and Marketing Costs

A range of additional legal fees, agents fees, stamp duty and marketing costs have been factored into the model estimated at 8% of total costs. Legal fees are estimated at £600 per open market house.

A2.2.7 Cost of Borrowing (Interest)

It is difficult to forecast future interest rates. At present the Bank of England Base Rate is 5.5% following the recent rate cut. Market expectations are for further rate reductions in 2008; hence the cost of borrowing for the scheme is estimated to be 6.75% (currently 1.25% above the base rate).

A2.3 Revenue

The revenue for the development is made up of revenue from the sale of the homes, shops, the hotel and other commercial premises.

A2.3.1 Commercial premises

Resale values for the various commercial premises were calculated on a per m² basis with commercial market advice from Carigiet Cowan.

Total revenue from the sale of the non-residential properties, in the Preferred Options Base Scenario, is estimated at around £22.3m. It is assumed that reinstatement of the canal will have a positive effect on resale values, and experience from other similar developments suggest that the canal could provide an uplift of around 18%, adding a further £4.01m to the resale values of the commercial premises in the Preferred Options Base Scenario.

This provides a total financial contribution to the scheme from sale of the commercial premises of some £26.35m.

A2.3.2 Residential properties

The sale prices payable by RSLs for their properties, and the prices for lower affordable and higher affordable homes have all been provided by South Lakeland District Council and vary between £52,000 for a one-bedroom RSL flat up to as much as £130,590 for a high quality property for affordable sale.

Resale values of market dwellings will vary considerably depending upon the location, quality of finish and other variables. However, Carigiet Cowan have looked closely at the local housing market and provided a range of values for one and two bedroom flats, and two and three bedroom houses. It is possible to take a cautious and more optimistic view of the likely resale values that have a dramatic effect on the financial performance of the scheme. Other current and recent comparable developments provide some evidence that

the more optimistic prices may be readily attainable. Flats in Sandaire House, developed by Crosby Homes in 2004 are currently being marketed from £175k - £240k. New apartments at the Riverside Village Development are being marketed at up to £250,000 and new townhouses at this development for more than £300,000.

Table A2 shows the estimated resale values of flats and houses by tenure, and market properties under cautious and more optimistic scenarios.

Table A2: Average Resale Values - Residential Properties

	Average Resale Values – Residential Properties			
Tenure	1 bed flat	2 bed flat	2 bed house	3 bed house
Market Properties – Cautious House Prices	£130,000	£180,000	£225,000	£300,000
Market Properties – Optimistic House Prices	£150,000	£200,000	£250,000	£325,000
RSL	£52,000	£56,000	£62,000	£65,000
Lower Quality Affordable	£65,295	£76,742	£88,801	£104,472
Higher Quality Affordable	£80,956	£91,413	£109,696	£130,590

Were the canal not restored, it is likely that the more optimistic house prices would not be attainable across all the properties in the development, yet relatively high house prices are still likely to be achievable given the overall attractiveness of Kendal and parts of the AAP area.

A3 Financial Models

Each of the scenarios have been modelled assuming costs vary according to whether homes are built to either Code for Sustainable Homes Level 3, 4 or 5, and taking a cautious and more optimistic view of resale values achievable for the market housing as per Table A2.

5 main scenarios have been modelled:

- Preferred Options Base Scenario;
- Variation 1 – Site 6 developed for 100% residential;
- Variation 2 – Site 6 developed for 100% employment;
- Variation 3 – Partial Development of the Allotments – new homes on site 4A; and
- Variation 4 – Complete development of the allotments – new homes on site 4A and 4B.

In addition, a model has been prepared that alters the mix of properties within the affordable housing:

- Variation 5 - Preferred Options Base Scenario applying a different property mix within affordable dwellings.

A3.1 Preferred Options Base Scenario

Main Assumptions:

- No development on the allotments at Fletcher Square;
- Mix of employment and residential development at Change Bridge;
- Would result in 539 new properties;
- 377 Market homes / 162 affordable;
- 383 Apartments, 156 Houses;
- 70% of affordable dwellings are houses, meaning of the 156 houses in the Preferred Options Base Scenario, 42 are private and 114 are affordable; and
- 335 market apartments, of which 251 (75%) are two bedroom flats.

Table A3 shows the total final development values for each Level of the Code for Sustainable Homes, for each set of house price assumptions.

Table A3: Total Final Development Value – Preferred Options Base Scenario

	Total Final Development Value	
Build Standard	**Cautious House Price Assumption**	**Optimistic House Price Assumption**
Code for Sustainable Homes 3	**-£3.21m**	**£4.54m**
Code for Sustainable Homes 4	**-£8.61m**	**-£863k**
Code for Sustainable Homes 5	**-£29.51m**	**-£21.76m**

The Preferred Options Base Scenario would see a maximum final development value of £4.54m. This figure is based upon optimistic house price assumptions and assumes all homes are built to Code for Sustainable Homes Level 3.

More cautious house prices assumptions *or* increased construction costs, to take into account Code for Sustainable Homes Levels 4 or 5, result in a much smaller or negative final development values for the Preferred Options Base Scenario and, indeed, each of the main variations. If homes are build to Code for Sustainable Homes Level 5 the Preferred Options Base Scenario and the variations make large (£20m+) losses regardless of house prices.

A3.2 Variation 1 – Site 6 100% residential

Site 6 is identified as a mixed use site in the Preferred Options Base Scenario. However this site could be developed for residential use only. This would increase the amount of houses in the scheme, at the expense of the loss of 2500m² of B2 industrial space and 500m² of office accommodation (this had been identified as a relocation site for Gilkes).

Main Assumptions:

- Site 6 developed for residential use only;
- Provides an additional 19 houses compared to the Preferred Options Base Scenario;
- Overall total of 558 dwellings, of which 393 are Market homes / 169 affordable;
- 383 Apartments, 175 Houses;
- 70% of affordable homes are houses – as per SLDC guidance, resulting in 57 houses for private sale, and 118 affordable homes; and
- 332 market apartments, of which 249 (75%) are two bedroom flats.

Table A4 shows the final development values, at Code for Sustainable Homes Levels 3, 4 and 5 and using different house price assumptions, when Site 6 is developed solely for residential use.

Table A4: Final Development Values - Site 6 100% residential

	Total Final Development Value	
Build Standard	**Cautious House Price Assumption**	**Optimistic House Price Assumption**
Code for Sustainable Homes 3	**-£2.45m**	**£5.61m**
Code for Sustainable Homes 4	**-£8.19m**	**-£128k**
Code for Sustainable Homes 5	**-£29.53m**	**-£21.47m**

If site 6 were to be developed entirely for the residential use, the total development value rises from £4.54m in the Preferred Options Base Scenario to £5.61m under the best case assumptions. This option, developing site 6 purely as a residential site, provides the highest final development value (under the optimistic house price assumptions and at Code for Sustainable Homes 3) while preserving the preferred property mix within the affordable homes. However, developing this site for residential use only results in the loss of employment land; and our model does not take into account any relocation costs of existing businesses, or the costs of providing an alternative site.

A3.3 Variation 2 – Site 6 100% Employment

As well as the Preferred Options Base Scenario (which sees the site as a mixed use site for residential and industrial) and Variation 1 (which identifies the site as 100% residential) we have been asked to check the impact of developing site 6 with no residential element, and developing the site for employment uses only as an extension to Parkside Business Park..

Main Assumptions

- Site 6 redeveloped with no residential element;
- 100% of site 3.20 developed for employment uses including B2 workshops as per Preferred Options Base Scenario and additional B1a offices;
- 18 houses lost compared to Preferred Options Base Scenario;
- 0.36 hectares of residential land removed from the development;
- Additional 1840m² of B1a offices;
- Additional 1400m² of B1offices factored in;
- Overall total of 521 dwellings, of which 365 are Market homes / 156 are affordable;
- 383 Apartments, 138 Houses;
- 70% of affordable homes are houses – meaning of the 138 homes, 108 are affordable, and 30 are private; and
- 335 market apartments, of which 251 are two-bedroom

Table A5 shows the total final development values for each Level of the Code for Sustainable Homes, for each set of house price assumptions if site 6 is developed for employment uses only.

Table A5: Final Development Values: Site 6 100% Employment

	Total Final Development Value	
Build Standard	**Cautious House Price Assumption**	**Optimistic House Price Assumption**
Code for Sustainable Homes 3	**-£4.73m**	**£2.72m**
Code for Sustainable Homes 4	**-£8.09m**	**-£2.35m**
Code for Sustainable Homes 5	**-£28.99m**	**-£22.83m**

Developing Site 6 for employment only provides the lowest final development value of each of the variations modelled. Developing site 6 solely for employment would result in a total development value of £2.72m under the best case assumptions – almost £2m lower than under the Preferred Options Base Scenario.

A3.4 Variation 3 – Partial Redevelopment of allotments

Two scenarios have been modelled that allow partial or total development of the allotment sites at Fletcher Square. Variations 3 and 4 model the impacts of developing some or all of the allotments for new housing. Variation 3 would see the development of around 1/3 of the allotments by allowing residential development on the 0.54ha site 4A. The remainder of the Fletcher Square area would remain as allotments.

Building on the allotments increases costs, as land acquisition, construction and associated costs of 23 additional houses are factored in, however it also increases revenue, as there are homes for sale.

Main Assumptions:

- Partial development of allotments at Fletcher Square. Site 4A developed for new housing;
- Increase of 0.54 hectares of residential land;
- Additional 23 houses (but zero flats) provided;
- Overall total of 562 dwellings, of which 393 market homes / 169 affordable;
- 383 Apartments, 179 Houses;
- 70% of affordable homes are houses – meaning of the 179 homes, 117 are affordable, and 62 are private;
- 331 market apartments, of which 248 are two-bedroom;

Table A6 shows the total final development values for each Level of the Code for Sustainable Homes, for each set of house price assumptions with partial development of the allotments.

Table A6: Final Development Values – Partial Development of Allotments

	Total Final Development Value	
Build Standard	**Cautious House Price Assumption**	**Optimistic House Price Assumption**
Code for Sustainable Homes 3	**-£3.6m**	**£4.57m**
Code for Sustainable Homes 4	**-£9.41m**	**-£1.24m**
Code for Sustainable Homes 5	**-£30.83m**	**-£22.66m**

Partial development of the allotments, developing 23 new homes on site 4A results in a slight increase in the final development value in the scheme going from a £4.54m profit (in the base scenario) to making a profit of £4.57m, under the most optimistic assumptions. High land acquisition costs, costs of construction and the impact of the high proportion of houses that must be are affordable explain why partial development of the allotments results in only a slight increase in the final development value.

A3.5 Variation 4 –Total Development of allotments

Variation 4 would see the development of all the allotments for new housing.

This would result in an additional 71 new homes compared to the Preferred Options Base Scenario. Again this increases both costs and revenue. Under this variation, 71 additional houses (as opposed to apartments) would be built.

Main Assumptions:

- Total development of allotments at Fletcher Square. Sites 4A and 4B developed for new housing;
- Increase of 1.56 hectares of residential land in the development;
- 71 additional houses provided;
- Overall total of 610 dwellings, of which 427 Market homes / 183 affordable;

- 383 Apartments, 227 Houses;
- 70% of affordable homes are houses – meaning of the 227 houses provided under this variation, 99 are market houses and 128 are affordable; and
- 328 market apartments, of which 246 are two bedroom.

Table A7 shows the total final development value, at each level of the Code for Sustainable Homes, and at different house prices if all of the allotments are developed for new housing.

Table A7: Final Development Values – Total Development of Allotments

	Total Final Development Value	
Build Standard	**Cautious House Price Assumption**	**Optimistic House Price Assumption**
Code for Sustainable Homes 3	**-£4.25m**	**£4.79m**
Code for Sustainable Homes 4	**-£10.91m**	**-£1.88m**
Code for Sustainable Homes 5	**-£33.46m**	**-£24.43m**

As with Variation 3, which includes partial development of the allotments, this variation provides a slightly larger profit to the scheme and delivers the largest nominal profit that preserves the Council's preferred mix of property types within the affordable housing. However, the difference in the final development value between this variation and Preferred Options Base Scenario is only around £250,000 and does not take into account any costs associated with providing alternative sites for allotments or compensating allotment holders. Costs associated with this variation are also significantly higher than in the Preferred Options Base Scenario (approximately £17m higher), and hence the overall profit margin is actually lower for this Variation than the Preferred Options Base Scenario.

A3.6 Variation 5 Applying a Different Property Mix for Affordable Housing

In order to improve the commercial performance of the scheme, an exception to the IPATH policy on affordable housing provision has been accepted for the AAP. 30% of new dwellings delivered by the AAP are required to be affordable, rather than the 50% required by IPATH. Kendal's housing needs suggest that the property mix within the affordable housing should be weighted towards houses, rather than flats, and that affordable dwellings delivered by the AAP should be composed of 30% flats and 70% houses.

Under the Preferred Options Base Scenario this results in 114 of the 156 houses that would be built being affordable (either affordable sale / shared equity or RSL). Just 42 houses would therefore be built for market sale. This requirement impacts on the financial models for the Preferred Options Base Scenario and each of the variations

However further changes to the mix of affordable properties (whilst retaining an overall market / affordable mix of 70 / 30%) has further positive effects on the commercial performance of the scheme, and therefore the potential contribution the scheme can make towards the canal restoration. Consequently a model has been developed that changes the affordable property mix in the Preferred Options Base Scenario. Rather than

a 70/30% split between houses and flats, Variation 5 applies a 60/40% split between houses and flats.

N.B. This variation would still mean 30% of all new dwellings are affordable, but change the proportions of affordable *houses* compared to affordable *flats*.

Main Assumptions:

- Based on Preferred Options Base Scenario;
- No development on the allotments at Fletcher Square;
- Mix of employment and residential development at Change Bridge;
- 539 new properties – same as Preferred Options Base Scenario;
- 377 Market homes / 162 affordable – same as Preferred Options Base Scenario;
- 383 Apartments, 156 Houses – same as Preferred Options Base Scenario;
- 60% of affordable dwellings are houses, (compared to 70% in Preferred Options Base Scenario) meaning of the 156 houses in is variation, 60 are private (42 in Preferred Options Base Scenario) and 96 (114) are affordable; and
- 317 (335) market apartments, of which 238 (251) (75%) are two-bedroom flats

Table A8 shows the total final development values for each level of the Code for Sustainable Homes, for each set of house price assumptions.

Table A8: Preferred Options Base Scenario - different property mix within affordable housing

	Total Final Development Value	
Build Standard	**Cautious House Price Assumption**	**Optimistic House Price Assumption**
Code for Sustainable Homes 3	**-£2.08m**	**£5.76m**
Code for Sustainable Homes 4	**-£7.47m**	**£372k**
Code for Sustainable Homes 5	**-£28.29m**	**-£20.45m**

Allowing a different mix of housing within the 30% affordable housing required, reducing the proportion of houses from 70% to 60%, increases the final development value achievable for the Preferred Options Base Scenario (under the best case scenario) from £4.54m to £5.76m.

If a 60/40% houses / flats mix is applied within the 30% affordable housing provision to each of the 4 variations they each produce greater final development values. These are shown on Table A9.

Table A9: Final Development Values - with different property mixes in affordable housing

	Total Final Development Value (at CSH3 and Optimistic House Prices	
Build Standard	**With 70 / 30% Houses / Flats split in affordable dwellings**	**With 60 / 40% Houses / Flats split in affordable dwellings**
Preferred Options Base Scenario	**£4.54m**	**£5.76m**
Variation 1 – site 6 100% Residential	**£5.61m**	**£7.02m**
Variation 2 – site 6 100% employment	**£2.72m**	**£3.59m**
Variation 3 – Partial Development of Allotments	**£4.57m**	**£5.46m**
Variation 4 – Total Development of Allotments	**£4.79m**	**£5.87m**

Allowing fewer affordable houses and more affordable flats enables there to be more houses for market sale and increases the overall profitability of the Preferred Options Base Scenario and each of the 4 variations.

A3.7 Summary and Conclusions

A3.7.1 Summary

Financial models have been produced for the Preferred Options Base Scenario and four main variations. These all preserve the preferred property mix of 70% houses and 30% flats within the overall 30% affordable housing.

All of the financial models result in a final development value (available as a contribution towards the costs of the canal restoration of between £2.7 and £5.6m. Note however that in each case, the modelling shows if more cautious house price assumptions are used, of if more than a handful of homes are built to a higher standard than Code for Sustainable Homes 3 neither the Preferred Options Base Scenario or the 4 variations generate any meaningful profits that could contribute toward the costs of the canal, and if homes are built to Code for Sustainable Homes 5 the Preferred Options Base Scenario and the variations all show large losses.

Developing the allotments either in part or in full makes relatively little difference to the financial performance of the scheme, extra revenue being largely offset by increased costs. However the option chosen for Site 6 makes a significant difference. Developing site 6 for 100% residential increases the final development value, compared to the Preferred Options base Scenario by £1.1m (at the cost of loss employment land). By contrast developing this site for 100% employment uses reduces the final development value by around £1.8m

Neither the baseline scenario nor any of the four variations can be made to show a profit if more cautious house prices assumptions are used, or more than a handful of homes are built at Code for Sustainable Homes 4 or above.

Table A10 shows the total development value generated under the Preferred Options Base Scenario and each of the four variations, using both cautious and optimistic house price assumptions, and assuming all dwellings meet Code for Sustainable Homes 3.

Table A10: Final Development Values Summary - All Variations

Scenario	Total Development Value (cautious house prices) at CSH 3	Total Development Value (optimistic house prices) at CSH 3
Preferred Option	-£3.21m	£4.54m
Variation 1 – Site 6 100% residential	-£2.45m	£5.61m
Variation 2 – Site 6 100% employment	-£4.73m	£2.72m
Variation 3 – Partial development on Allotments	-£3.6m	£4.57m
Variation 4 - Total Development of all of the Allotments	-£4.25m	£4.79m
Variation 5 – Preferred Options Base Scenario – 60/40 houses / flats mix within affordable properties	-£2.08m	£5.76m

Variation 5 changes the property mix within the affordable housing. Relaxing the requirement that 70% of affordable dwellings be houses, so that there is a 60 / 40% split between affordable houses and affordable flats has a positive impact on the final total development values for all of the variations. This is shown in

Table A10.

A3.7.2 Conclusions

The financial modelling indicates the likely level of contribution development at the Canal Head could provide towards the costs of restoring the canal. This is in the order of £4-5m depending upon the variation chosen.

The Preferred Options Base Scenario and each of the four variations are commercially feasible and show a final development value of between £2.72m and £5.61m.

Variation 1 - Developing site 6 for 100% residential use produces the largest final development value *whilst preserving the preferred mix of dwellings within the affordable housing*.

Variation 2 - Developing site 6 for employment only - is the worst performing variation, and the two variations that consider developing the allotments in part or in full contribute little in the way of extra development value, given the substantial extra costs of these two variations.

Modelling indicate the importance of the mix of dwellings within the affordable housing. The requirement that 70% of affordable dwellings be houses reduces the number of houses available for private sale. As these are some of the most profitable parts of the development, changing the requirement to 60% has a positive effect on total development

values for each of the scenarios. When applied to the land use patterns assumed for the Preferred Options Base Scenario, changing the property mix with the affordable housing provision increases the final development value by £1.2m

Applying this change also affects the financial performance of the other variations, shown in Table A9.

Appendix B

Davis Langdon Residential Construction Costs Assumptions

B1 Davis Langdon Residential Construction Costs Assumptions

Davis Langdon LLP assumptions for residential construction costs are based upon the following:

- One-bed apartment = 40m²;
- Two-bed apartment = 50m²;
- Two-bed property = 65m²; and
- Three-bed property = 75m²

Davis Langdon have priced these for the lower affordable, higher affordable and market value construction specification, and have made the following assumptions:

Lower affordable properties specification is that contained within the 'SLDC Affordable Housing Prices for Low Cost Home Ownership in South Lakeland 2007/08', with no en-suite, minimal tiling, no white goods or floor coverings (although we have included for carpet to communal areas to apartment developments), bath only, no plumbing to dishwasher, minimal NHBC electrics, low spec internal doors and no fires.

Higher affordable specification to include for extra wall tiling, vinyl floor finish to kitchens and bathrooms, increased kitchen specification, shower over bath including curtain, and slight increase to M&E specification.

Market value specification is as per the higher affordable properties, but includes for increased specification to roof tiles, timber windows and external doors, increased internal door specification, carpet to apartments, increased kitchen and tile specification, white goods, shower screen above baths, with an en-suite included to the three-bed properties, and fires to the house types. Increased M&E to include for downlights and towel radiators to bathrooms etc.

The construction costs have been based upon a scheme of 6nr properties for the house types, and a 20nr apartment scheme for the apartment types. The costs are likely to vary for larger or smaller developments.

The following assumptions/exclusions apply to all:-

- The costs are for construction and external works within the curtilage of a site;
- There is no allowance for site abnormals such as contamination, relocation of existing services, site clearance etc;
- The external works include for paths, tarmac parking areas, boundary fencing and walls, turfing. No allowance has been made for works to highways or footpaths surrounding a site;
- Costs have been included for the increased requirements under the 'Code for Sustainable Homes', based upon the scheme sizes as detailed above, and on a typical scheme. These costs would be dependent upon the site and the design. We have not priced for 'Level 6' as this is currently unlikely to be achievable;
- The preliminaries (general and site specific) have been included at 20%;
- The Contractors OH&P have been included at 10%;
- A contingency allowance has been included at 2%;
- No allowance has been made for pre or post contract design or professional fees;

- The South Lakeside location factor has been applied;
- Costs are current to Q407;
- No allowance has been made for inflation; and
- No allowance has been made for VAT, legal fees or finance costs.

Appendix C

Davis Langdon Residential Construction Costs Estimates

C1 Davis Langdon Residential Construction Cost Estimates

Table C1: Residential Construction Costs (Code for Sustainable Homes 3)

Property Type	Lower Affordable Prices' Properties	Higher Affordable Prices' Properties	Market Property
1 bed flats (40 sq. M)	£63,492	£65,399	£75,981
2 bed flats (50 sq. M)	£70,382	£72,531	£85,553
2 bed houses/bungalows (65 sq. M)	£83,680	£86,919	£106,385
3 bed houses (75 sq. M)	£92,892	£96,549	£120,045

Table C2: Residential Construction Costs (Code for Sustainable Homes 4)

Property Type	Lower Affordable Prices' Properties	Higher Affordable Prices' Properties	Market Property
1 bed flats (40 sq. M)	£67,224	£69,131	£81,205
2 bed flats (50 sq. M)	£75,606	£77,756	£90,777
2 bed houses/bungalows (65 sq. M)	£97,264	£100,503	£119,969
3 bed houses (75 sq. M)	£106,476	£110,133	£133,629

Table C3: Residential Construction Costs (Code for Sustainable Homes 5)

Property Type	Lower Affordable Prices' Properties	Higher Affordable Prices' Properties	Market Property
1 bed flats (40 sq. M)	£95,586	£97,493	£115,539
2 bed flats (50 sq. M)	£109,940	£112,089	£125,110
2 bed houses/bungalows (65 sq. M)	£115,177	£118,416	£137,882
3 bed houses (75 sq. M)	£124,389	£128,046	£151,542

Appendix D

Infrastructure Constraints

D1 Infrastructure Constraints

Based on a review of the existing utility infrastructure along the canal alignment and within the Area Action Plan area, a number of existing utility constraints are identified. Diversion costs have been gathered for service diversions identified at this stage. A summary of information is attached. These costs are budget costs and are likely to be reviewed in the future as further details are developed. This section considers constraints poses by the existing infrastructure and by potential supply of utility services to the new development area.

The canal has already been significantly developed and as such has a reasonable distribution of existing utility services. The following observations relate to key infrastructure beyond that normally expected of a developed urban site:

D1.1 Existing Infrastructure

- There is an existing Gas Valve station off Parr Street. This vale station is sited on a strategic National Grid trunk main route. Intermediate and high pressure gas mains run along both the historic canal alignment and Lound Road, up from the south to the valve station, where a 10 inch intermediate pressure gas main heads off to the east.
- There is a 1350mm Dia combined sewer which runs from north to south along Aynam Road, around the western side of the cemetery along the old canal alignment and across Parkside Road to the south.
- There is an existing primary sub-station off Lound Road. Associated HV cables from this sub station run to the north east along Parkside Road, and to the north along canal alignment to the west side of the allotments, past the Gas Valve Station to Sunnyside.
- Telewest fibre optic cables are also located along the historic canal alignment, and along Little Aynam.

D1.2 Proposed Utility Support

Initial investigation has been made to identity possible future constraints associated with utility supply. Discussion is ongoing with United Utilities associated for the supply of water and electricity. Although we are not yet in receipt of a formal response, we have been made aware through discussion that the following potential constraints exist:

- Kendal Primary substation is currently operating close to or at capacity. It is likely that significant development would require investment for network reinforcement from the Developer. It is likely that a new Primary Substation would be required; however this is yet to be confirmed with United Utilities.
- Kendal currently receives water from United Utilities, from Thirlmere. United Utilities are allowed to pump a limited amount of water from this reservoir (the majority being used for river flow compensation), however during low flow periods, particularly in the peak tourist season, available water is limited both by reservoir capacity and capacity of the treatment works to draw sufficient water from the lowered reservoir. Service reservoirs that supply Kendal when the primary treatment works are inoperable are of limited size and are at the end of their design lives. Water restrictions are occasionally put in place when supply struggles to meet demand. United Utilities have a frame work plan to address the supply problems in the medium and longer term, the programme for delivering this should be considered as a potential constraint to development area. United Utilities confirm that there is sufficient existing capacity within the network, as improvement works have already begun on the supply infrastructure.

A new water main is proposed to run under Aynam Road. This is intended to supply properties to the west side of the river only. It is anticipated that works will begin early next financial year. While it is unlikely that the development area will need to be supplied by this main, it should be considered as a constraint in terms of existing utilities.

- Ground water abstraction is a potential alternative to supply from Thirlmere, however ground water in the area is believed to be of poor quality and there is an existing desire to phase out existing boreholes in favour of alternative supply.
- The existing site is reasonably well served for drainage, with opportunities to discharge to the ground, the River Kent and the existing sewerage network. Sustainable Urban Drainage Systems and discharge to local watercourses should be considered where appropriate to reduce demand on the existing sewerage network. Based on a search of the Environment Agency Source Protection Zone (SPZ) website, it can be confirmed that the site is not located within an existing SPZ. It should be noted that surface water drainage for new sites weather being discharged to watercourses controlled by the EA, or sewers owned by United Utilities will probably required attenuation to equivalent green field run off rates.
- A review of the Environment Agency Flood Map records shows that a large portion of the development area is located within the flood plain. This may pose a constraint to development, in planning terms. It also poses a constraint in terms of site drainage capacity during adverse weather conditions. Further discussion with the Environment Agency will be required to understand the constraints in detail and to assess what impact this may have on the development proposals.

D1.3 Further Study

It is recommended that further dialogue is undertaken with utility suppliers to better establish the scale of the existing supply constraints, and provisions required to overcome them.

It is also recommended that a more detailed study of existing infrastructure is undertaken looking at the whole of the Area Action Plan area in addition to the canal alignment.

It should be noted however that typically at this stage utility company involvement may be limited until further details of the development, such as time scale and more detailed identification of utility demands are established.

Further discussion is required with the EA to establish how the constraints associated with the flood plain may be managed.

Appendix E

Policy Appraisal Tables

E1 Options Policy Appraisal Tables

Table E1: National Planning Policy

	PPS1 Delivering Sustainable Development	PPS 3 Housing	PPS6 Planning for Town Centres	PPS 7 Sustainable Development in Rural Areas	PPS9 Biodiversity and Geological Conservation	PPS10 Planning for Sustainable Waste Management	PPS22 Renewable Energy	PPS23 Planning and Pollution Control	PPS25 Development and Flood Risk	PPG4 Industrial, commercial development and small firms	PPG13 Transport	PPG17 Planning for Open space, Sport and Recreation	PPG24 Planning and Noise	PPG15 Planning and the Historic Environment	PPG16 Archaeology and Planning
Option 1	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place
Option 2	Fair to good - with mixed use development in a sustainable location promoting high quality design and public engagement and services, plus employment opportunities. However, more could be done in response to climate change, resource management and community safety.	Fair - though could provide a greater percentage of affordable housing to meet the needs of the local communities.	Good - seeks to promote some small scale, independent retail provision that would not impact negatively on the vitality and viability of the primary and secondary shopping areas but to promote Kendal overall as a visitor destination.	Good - focusing new development in an accessible location, primarily on brownfield land, providing leisure opportunities for the local community and visitors and generating new employment opportunities and affordable housing. Could facilitate the reinstatement of the Lancaster Canal with wider benefits for rural tourism.	Poor - developing on brownfield sites in a rural area means that there will be minimal impact on wildlife on the site. However there may be risk to the nearby River Kent SAC and the loss of allotments may impact negatively. The option to promote biodiversity has not been explored.	Poor - no strategy set out for prudent use of resources or for waste management and for the relocation of the existing waste management site. However it is not the place of the AAP to set out Council's waste management policies - this should be set out in the RSS and Core Strategy.	Neutral - no policies are set out in relation to renewable energy or use within the option.	Fair - it is acknowledged in the I&O report that further ground investigation and chemical testing will be necessary to identify risk to public health and safety, the natural environment, the built environment and economic activities.	Fair - EA have been consulted.	Good - the option identifies where commercial development will be located providing certainty to the development process.	Fair/Good - responds well to most objectives. There may be a marginal reduction in the need to travel by car in the Canal Head area.	Good - provides for open space.	Fair - no major noise source proposed. However there may be a conflict with locating residential development (noise sensitive) in close proximity to the ski slope.	Very good - the urban design strategy has been developed with reference to the locally sensitive built heritage.	See EIA scoping report.
Option 3	Fair to good - with mixed use development in a sustainable location promoting high quality design and public engagement and services, plus employment opportunities. However, more could be done in response to climate change, resource management and community safety.	Good - provides a less dense mix of housing, with 30% affordable housing. However the mix could be improved to reflect local housing needs.	Good - seeks to promote some small scale independent retail provision that would not impact negatively on the vitality and viability of the primary and secondary shopping areas but to promote Kendal overall as a visitor destination.	Good - focusing new development in an accessible location, primarily on brownfield land, providing leisure opportunities for the local community and visitors and generating new employment opportunities and affordable housing. Could facilitate the reinstatement of the Lancaster Canal with wider benefits for rural tourism.	Poor - developing on brownfield sites in a rural area means that there will be minimal impact on wildlife on the site. However there may be risk to the nearby River Kent SAC and the loss of allotments may impact negatively. The option to promote biodiversity has not been explored.	Poor - no strategy set out for prudent use of resources or for waste management and for the relocation of the existing waste management site. However it is not the place of the AAP to set out Council's waste management policies - this should be set out in the RSS and Core Strategy.	Neutral - no policies are set out in relation to renewable energy or use within the option.	Fair - it is acknowledged in the I&O report that further ground investigation and chemical testing will be necessary to identify risk to public health and safety, the natural environment, the built environment and economic activities.	Fair - EA have been consulted.	Good - the option identifies where commercial development will be located providing certainty to the development process.	Good - fits with objectives within PPG13. Larger number of residential units means that people living in the study area would benefit from increased accessibility to jobs, shops and leisure services both within the development itself and also the town centre.	Good - provides for open space.	Fair - no major noise source proposed. However there may be a conflict with locating residential development (noise sensitive) in close proximity to the ski slope.	Very good - the urban design strategy has been developed with reference to the locally sensitive built heritage.	See EIA scoping report.
Option 4	Fair to good - with mixed use development in a sustainable location promoting high quality design and public engagement and services, plus employment opportunities. However, more could be done in response to climate change, resource management and community safety.	Good - provides a mix of high quality housing, with 30% affordable housing. However the mix could be improved to reflect local housing needs.	Good - seeks to promote some small scale independent retail provision that would not impact negatively on the vitality and viability of the primary and secondary shopping areas but to promote Kendal overall as a visitor destination.	Good - focusing new development in an accessible location, primarily on brownfield land, providing leisure opportunities for the local community and visitors and generating new employment opportunities and affordable housing. Could facilitate the reinstatement of the Lancaster Canal with wider benefits for rural tourism.	Poor - developing on brownfield sites in a rural area means that there will be minimal impact on wildlife on the site. However there may be risk to the nearby River Kent SAC and the loss of allotments may impact negatively. The option to promote biodiversity has not been explored.	Poor - no strategy set out for prudent use of resources or for waste management and for the relocation of the existing waste management site. However it is not the place of the AAP to set out Council's waste management policies - this should be set out in the RSS and Core Strategy.	Neutral - no policies are set out in relation to renewable energy or use within the option.	Fair - it is acknowledged in the I&O report that further ground investigation and chemical testing will be necessary to identify risk to public health and safety, the natural environment, the built environment and economic activities.	Fair - EA have been consulted.	Good - the option identifies where commercial development will be located providing certainty to the development process.	Fair - The reduction in the mixed use portion means that the subsequent lack of shared trips between uses would do less to promote accessibility to jobs, shops, and leisure services in the area, although access to the town centre would still provide a good level of accessibility.	Good - provides for open space.	Fair - no major noise source proposed. However there may be a conflict with locating residential development (noise sensitive) in close proximity to the ski slope.	Very good - the urban design strategy has been developed with reference to the locally sensitive built heritage.	See EIA scoping report.
Option 5	Fair to good - with mixed use development in a sustainable location promoting high quality design and public engagement and services, plus employment opportunities. However, more could be done in response to climate change, resource management and community safety.	Fair/Good - provides a mix of high quality housing, with 30% affordable housing. However the mix could be improved to reflect local housing needs.	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Poor - no strategy set out for prudent use of resources or for waste management and for the relocation of the existing waste management site. However it is not the place of the AAP to set out Council's waste management policies - this should be set out in the RSS and Core Strategy.	Neutral - no proposals in place	Fair - it is acknowledged in the I&O report that further ground investigation and chemical testing will be necessary to identify risk to public health and safety, the natural environment, the built environment and economic activities.	Fair - EA have been consulted.	Neutral - no proposals in place	Poor - in terms of promoting sustainable modes by freight, the site would only be accessible by road as there are no suitable rail or waterborne links. Option is also likely to increase the need to reliant of the car as people need to carry heavy loads of shopping. It is also likely that there would be a reduction in the provision of some leisure and retail facilities.	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	See EIA scoping report.

Table E2: RSS North West Plan

	Housing	Retail	Transport	Employment	Open space and Recreation	Tourism and Leisure	Environment and Conservation
Relevant policies	Policy L2 - Understanding Housing Markets, be able to adopt a concerted approach to influence, improve and support housing market, Policy L3 - Existing housing Stock and Housing, greater understanding of local housing market; Policy L4 - Regional Housing Provision, be able to achieve the identified housing provision, Policy L5 - Affordable Housing, proportion should be incorporated into every development.	Policy W5 - Retail Development, retiling facilities should be enhanced to improve vitality and viability.	Policy RT1 - A Regional Public Transport Framework, reduce overcrowding in key public transport corridors, Policy RT5 - Sustainable Freight Transport move towards rail and waterborne freight in preference to road and develop travel plans for staff, Policy RT6 Parking Policy and Provision, a co-ordinate approach and the use of maximum standards, Policy RT7 - Regional Networks for Walking and Cycling, incorporate walking and cycling networks from the outset, Policy RT8 - Regional Priorities for Transport Investment and Management, maintaining and making the best use of existing networks.	Policy RDF3 - Rural Areas, Concentrate employment within key service centres, Policy W3 - Supply of Sub-regional and local employment land, should be appropriate balance of B1/B2/B8 use.	Figure 11.1 - Overall objectives of Regional Parks, looking for major improvements in the provision of high quality, easily accessible recreation, opportunities.	Policy W6 - Tourism and the Visitor Economy, deliver improved economic growth and quality of life through sustainable tourism activity, Policy W7 - Principles for Tourism Development, meeting the needs of a diverse range of people and also improving the overall tourism of the region.	Policy EM 1 - Integrated Land Management, support conservation led regeneration, Figure 11.1 conservation of landscape close to where people live.
Option 1	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place
Option 2	Fair - there is a designation for affordable housing and majority of new build is on brownfield sites in accordance with the guidance set out in table 9.1 of the RSS. Although better understanding could be made of local housing market.	Good - proposes provision of small scale retailing that will serve new community and visitors.	Fair - Would have a slight impact on the existing network, but would act as a catalyst for improvements pedestrian and cycle facilities in the area.	Good - provides new uses for obsolete employment sites and will provide for on-site relocation of other employment uses. Making appropriate use of brownfield sites and also appropriate balance of B1/B2/B8 uses.	Good - new open space provision is proposed although some existing spaces will be lost to development.	Very Good - option contributes to creating a quality environment, promoting greater understanding of environmental quality and visitor facilities.	Fair/Good - good preservation of local character through urban design, however limited proposals for environmental management or enhancement.
Option 3	Good - there is a designation for affordable housing and majority of new build is on brownfield sites. Appropriate mix of type and density for local people as identified in the RSS para 9.19 (i).	Good - proposes provision of small scale retailing that will serve new community and visitors.	Fair/Good - Mixed uses within the Canal Head would provide good opportunity to develop a successful Travel Plan. Would have a slight impact on existing networks. While congestion on the highway network may increase, significant improvements to pedestrian and cycle facilities in the area would be provided. Mixed uses with differing peak times provide opportunities for shared parking provisions.	Good - provides new uses for obsolete employment sites and will provide for on-site relocation of other employment uses. Making appropriate use of brownfield sites and also appropriate balance of B1/B2/B8 uses.	Fair - new open spaces will be created however some will also be lost including allotments.	Good- option contributes to creating a quality environment, promoting greater understanding of environmental quality and visitor facilities.	Fair/Good - good preservation of local character through urban design, however limited proposals for environmental management or enhancement.
Option 4	Fair/Good - there is a designation for affordable housing and majority of new build is on brownfield sites. Appropriate mix of type and density for local people. The increased density however could lead to potential adverse negative impact on housing stock (Policy L4).	Good - proposes provision of small scale retailing that will serve new community and visitors.	Fair - Would have a slight impact on existing networks, and provide significant improvements to pedestrian and cycle facilities in the area. However, may cause congestion on existing networks.	Poor - no additional office or industrial land uses and Gilkes should be located off site although the option of re-locating on site has been left available should no suitable off-site location be found.	Fair - new open spaces will be created however some will also be lost including allotments.	Good- option contributes to creating a quality environment, promoting greater understanding of environmental quality and visitor facilities.	Fair/Good - good preservation of local character through urban design, however limited proposals for environmental management or enhancement.
Option 5	Neutral - no proposals in place	Fair - It is identified in Policy W5 of the RSS that there is need for new retail development within Kendal, but retail development which supports entrepreneurship will be encouraged.	Poor - Addition of extra freight vehicles and car on the transport network could exacerbate congestion. Freight would use road rather than rail or water and would not have direct access to the regional highway network. Size of proposed development would restrict the potential to improve pedestrian and cycle links.	Fair - Will provide new jobs, but will have impact on existing employment and local businesses. Would not provide an acceptable balance of land use.	Neutral - no proposals in place	Neutral - no specific principles identified.	Poor - local character would not be preserved through the introduction of a large scale food retail store. There are also no specific proposals for environmental management or enhancement.

Table E3: Cumbria and Lakeland Joint Structure Plan 2001-2016

	Housing	Retail	Transport	Employment	Open space and Recreation	Tourism and Leisure	Community	Environment and Conservation
Relevant policies	Access to good quality housing for all.	Promote the vitality and viability of town centres.	Good transport services and communications linking people to jobs, schools, health and other services.	A flourishing and diverse local economy.	Places to live in a safe and healthy manner.	New tourism facilities will be directed to key service centres and to locations that enable the economic and physical regeneration of an area, where they bring benefit to the local community.	Vibrant, harmonious and inclusive communities.	Quality built, natural and historic environments.
Option 1	Neutral - no proposals in place	Neutral - no proposals in place	Fair - no proposals in place and preserves alignments of historic canal	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place
Option 2	Fair - there is a designation for affordable housing and majority of new build is on brownfield sites.	Good - proposes provision of complementary, small scale retailing on the edge of Kendal Town Centre, that will serve new community and visitors.	Good - reinstatement of historic canal and would act as a catalyst for improvements pedestrian and cycle facilities in the area and in particular to the town centre. Limited development means that impact on highway network and congestion would be restricted.	Good - provides new mix of uses, including hotel, office and retail uses on obsolete employment sites and will provide for on-site relocation of other employment uses. Making appropriate use of brownfield sites and also appropriate balance of B1/B2/B8 uses.	Good - new open space provision is proposed although some existing spaces will be lost to development. Canal reinstatement has potential to boost cycling and walking.	Good - reinstatement of canal, along with hotel and niche retail / food and drink uses, close to Kendal Town Centre will boost tourism and regeneration effects.	Good - new mixed tenure development, enhanced linkages within Kendal and mix of uses conducive to creation of vibrant and integrated community around the restored canal.	Fair/Good - good preservation of local character through urban design, however limited proposals for environmental management or enhancement. Views of, and open space around Kendal castle preserved.
Option 3	Good - there is a designation for affordable housing and majority of new build is on brownfield sites. Appropriate mix of type and density for local people.	Good - proposes provision of complementary, small scale retailing on the edge of Kendal Town Centre, that will serve new community and visitors.	Fair/Good - reinstatement of historic canal and would act as a catalyst for improvements pedestrian and cycle facilities in the area and in particular to the town centre. Increased traffic generated by development may impact upon congestion in town centre.	Good - provides new mix of uses, including hotel, office and retail uses on obsolete employment sites and will provide for on-site relocation of other employment uses. Making appropriate use of brownfield sites and also appropriate balance of B1/B2/B8 uses.	Fair - new open spaces will be created however some will also be lost including allotments. Canal reinstatement has potential to boost cycling and walking.	Good - reinstatement of canal, along with hotel and niche retail / food and drink uses, close to Kendal Town Centre will boost tourism and regeneration effects.	Good - new mixed tenure development, enhanced linkages within Kendal and mix of uses conducive to creation of vibrant and integrated community around the restored canal.	Fair/Good - good preservation of local character through urban design, however limited proposals for environmental management or enhancement. Views of castle preserved.
Option 4	Fair/Good - there is a designation for affordable housing and majority of new build is on brownfield sites. Appropriate mix of type and density for local people. The increased density however could lead to potential adverse negative impact on housing stock.	Good - proposes provision of complementary, small scale retailing on the edge of Kendal Town Centre, that will serve new community and visitors.	Fair/Good - reinstatement of historic canal and would act as a catalyst for improvements pedestrian and cycle facilities in the area and in particular to the town centre. Increased traffic generated by development may impact upon congestion in town centre.	Fair- no additional office or industrial land uses and Gilkes would be located off site (although the option of re-locating on site has been left available should no suitable off-site location be found) but hotel and retail development would contribute towards a more diverse local economy.	Fair - new open spaces will be created however some will also be lost including allotments. Canal reinstatement has potential to boost cycling and walking.	Good - reinstatement of canal, along with hotel and niche retail / food and drink uses, close to Kendal Town Centre will boost tourism and regeneration effects.	Fair - mixed tenure development, and enhanced linkages within Kendal though limited mix of uses under this option less conducive to creation of vibrant and integrated community around the restored canal.	Fair/Good - good preservation of local character through urban design, however limited proposals for environmental management or enhancement. Views of castle preserved.
Option 5	Neutral - no proposals in place	Fair - Could have negative impact on vitality of small scale retail within town centre.	Poor - Addition of extra freight vehicles and cars on the transport network would contribute towards congestion. Size of proposed development would restrict the potential to improve pedestrian and cycle links.	Fair- Will provide opportunity for new jobs but could impact on existing shops in town centre. No additional office or industrial land use.	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place

Table E4: South Lakeland Local Plan

	Housing	Retail	Transport - road safety, rural accessibility and peak hour traffic	Employment	Open spaces	Allotments	Conservation Area	Tourism	Environment and Conservation
Option 1	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place
Option 2	Fair - not designated for housing. Provides affordable housing.	Good - proposes provision of small scale retailing that will serve new community and visitors.	Fair - Due to lower density of uses, impact on the existing network is likely to be moderate. Location of majority of residential dwellings is to the south, and may cause an increase in car trips between this section of the site and the town centre.	Good - provides new uses for obsolete employment sites and will provide for on-site relocation of other employment uses.	Good - new open space provision is proposed although some existing spaces will be lost to development.	Neutral - no proposals in place to replace allotments.	Good - urban design strategy taken the influence of the conservation area into account.	Very Good - option contributes to creating a quality environment, promoting greater understanding of environmental quality and visitor facilities.	Fair - local biodiversity value has been consideration however there are limited proposals for management and enhancement.
Option 3	Fair - not designated for housing. Provides affordable housing.	Good - proposes provision of small scale retailing that will serve new community and visitors.	Fair/Good - Higher density will lead to an increased pressure on the existing network. However, this could lead to greater opportunities for shared trips between the mixed use elements of the scheme promoting increased walking/cycling trips.	Good - provides new uses for obsolete employment sites and will provide for on-site relocation of other employment uses.	Fair - new open spaces will be created however some will also be lost including allotments.	Very poor - allotments lost to facilitate development without provision for an alternative location identified.	Good - urban design strategy taken the influence of the conservation area into account.	Poor - option contributes to creating a quality environment, promoting greater understanding of environmental quality and visitor facilities.	Fair - local biodiversity value has been consideration however there are limited proposals for management and enhancement.
Option 4	Fair - not designated for housing. Provides affordable housing.	Good - proposes provision of small scale retailing that will serve new community and visitors.	Fair - lower levels of non-residential uses within the area would reduce the attractiveness of the area as a destination and would reduce the potential for shared trips.	Poor - no additional office or industrial land uses and Gilkes should be located off site although the option of re-locating on site has been left available should no suitable off-site location be found.	Fair - new open spaces will be created however some will also be lost including allotments.	Very poor - allotments lost to facilitate development without provision for an alternative location identified.	Good - urban design strategy taken the influence of the conservation area into account.	Good - option contributes to creating a quality environment, promoting greater understanding of environmental quality and visitor facilities.	Fair - local biodiversity value has been consideration however there are limited proposals for management and enhancement.
Option 5	Neutral - no proposals in place	Fair - It is identified that there is need for new retail development within Kendal, but retail development which supports entrepreneurship will be encouraged.	Poor - Addition of extra freight vehicles and cars on the transport network would contribute to peak hour congestion and potentially create road safety issues. Location of supermarket close to town centre would potentially reduce rural accessibility for those without access to a private car.	Poor - would not convert or re-use and old building, and could have a negative impact on the physical characteristic of the site.	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place

Table E5: South Lakeland Community Strategy

	Health	Jobs, skills and regeneration	Affordable housing	Access/Transport/Infrastructure	Quality environment	Community involvement	Culture	Crime and Disorder Reduction	Children and young people	Economy	Building and Natural Environment	Healthy Communities	Heritage and culture	Housing and Planning	Older people	Safer communities	Stronger communities
Relevant policies	All individual and communities in SL will be enabled and encouraged to achieve optimal health and well-being. Priority will be given to improving equity of access to the resources needed by rural residents to develop and sustain good health, and key health improvement issues for older people, children and young people.	A healthy and diverse economy which promotes enterprise and innovation, builds on its environmental strengths, maintains a highly-skilled and educated workforce and contributes to the high quality of life in the area.	All residents should be able to access and or retain good quality affordable homes suited to their needs. Recognising the high incidence of low incomes against high house prices, the priority must be the provision of affordable housing to rent although affordable home ownership initiatives will also be pursued.	Communities will have access to work, services and leisure by safer, more sustainable and affordable transport options, particularly through the development of public and community transport.	The rich, natural, built and heritage environment of SL is sustained and wherever possible enhanced for its own sake and for the residents and visitors to the area. People will have a greater understanding of the relevant issues and will benefit from opportunities for increased contact with nature and find a sense of place and belonging.	The community will play a positive role in informing and influencing the processes which determine how decisions are made and how resources are used. In particular, ways will be found to enable young people, people with disabilities and minority groups to become more involved.	To make SL a place where culture and creativity are highly valued, enabling them to play a pivotal and dynamic role in enriching all aspects of social, economic and community life and to reveal the unique character and potential of the area for the benefit of local people and visitors.	SL will remain a safe and secure place to live, work and learn without fear of crime and disorder.	There is the best for every child, young person and their families. Enabling children and young people to stay safe, be healthy, enjoy and achieve, make a positive contribution and achieve economic well-being.	Strong, dynamic, diverse and sustainable Cumbria positively positioned in the global economy.	Built environment is cleaner and greener and the high quality natural environment and countryside is protected and enhanced for current and future generations.	All live healthier lives and enjoy high quality services that meet whatever health and social care needs we have.	Diverse heritage and culture is celebrated and residents and visitors enjoy a wide variety of recreation, sporting, artistic and cultural opportunities.	Housing needs are met and decent, high quality affordable homes help create communities where people want to live.	Improve health and well-being of older people.	Communities continue to be safe, secure cohesive and confident.	People respect and value each other and feel able to influence the decisions that affect them and their communities.
Option 1	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals	Neutral - no proposals	Neutral - no proposals in place
Option 2	Fair - the option will create new public spaces and could facilitate the restoration of the Canal all of which can contribute to physical and mental well-being. However there are no specific actions proposed.	Good - provision of high quality business spaces promoting diverse uses including creative and knowledge based industries.	Fair - limited amount of family oriented homes.	Fair - due to lower densities, there would be reduced impact on existing networks. However, the lower densities also means it is unlikely to affect a major change towards sustainable transport modes.	Fair - open spaces proposed however as set out in the SA, more can be done to promote natural heritage. Good in terms of built heritage where new build considers and is complementary to existing built heritage.	Good - public consultation procedures are being followed through the AAP process. The AAP will prompt new development in the area that will create valuable public spaces open to the community.	Very good - creation of a new canal quarter promoting new business and activities including creative and knowledge based industries and tourism.	Neutral - no proposals in place	Neutral - no proposals in place	Good - provision space for creative and knowledge based investment.	Fair - provision of open space and high quality new built environment. However, there are no specific provisions for biodiversity.	Fair - the option will create new public spaces and could facilitate the restoration of the Canal all of which can contribute to physical and mental well-being.	Very good - creation of a new canal quarter promoting new business and activities including creative and knowledge based industries and tourism.	Fair - limited amount of family oriented homes.	Neutral - no proposals	Neutral - no proposals	Good - public consultation procedures are being followed through the AAP process. The AAP will prompt new development in the area that will create valuable public spaces open to the community.
Option 3	Poor - the option will create new public spaces and could facilitate the restoration of the Canal all of which can contribute to physical and mental well-being. However the loss of allotments could have considerable implications.	Good - provision of high quality business spaces promoting diverse uses including creative and knowledge based industries.	Good - more housing provided.	Good - Larger densities of development provide for greater opportunities for internal shared trips and improved pedestrian and cycle routes. Increased provision of residential dwellings on edge of town centre creates opportunities for walking and cycling to employment in the town centre and improved access to the town's public transport facilities.	Fair - open spaces proposed however as set out in the SA, more can be done to promote natural heritage. Good in terms of built heritage where new build considers and is complementary to existing built heritage.	Good - public consultation procedures are being followed through the AAP process. The AAP will prompt new development in the area that will create valuable public spaces open to the community.	Very good - creation of a new canal quarter promoting new business and activities including creative and knowledge based industries and tourism.	Neutral - no proposals in place	Neutral - no proposals in place	Good - provision space for creative and knowledge based investment.	Poor - due to loss of allotments.	Fair - the option will create new public spaces and could facilitate the restoration of the Canal all of which can contribute to physical and mental well-being.	Very good - creation of a new canal quarter promoting new business and activities including creative and knowledge based industries and tourism.	Good - more housing provided	Neutral - no proposals	Neutral - no proposals	Good - public consultation procedures are being followed through the AAP process. The AAP will prompt new development in the area that will create valuable public spaces open to the community.
Option 4	Poor - the option will create new public spaces and could facilitate the restoration of the Canal all of which can contribute to physical and mental well-being. However the loss of allotments could have considerable implications.	Good - provision of high quality business spaces promoting diverse uses including creative and knowledge based industries.	Good - more housing provided.	Fair - reduced mix of uses would do less to promote sustainable transport choices and would also provide less opportunities for shared trips.	Fair - open spaces proposed however as set out in the SA, more can be done to promote natural heritage. Good in terms of built heritage where new build considers and is complementary to existing built heritage.	Good - public consultation procedures are being followed through the AAP process. The AAP will prompt new development in the area that will create valuable public spaces open to the community.	Very good - creation of a new canal quarter promoting new spaces and small specialist shops and restaurants.	Neutral - no proposals in place	Neutral - no proposals in place	Fair - some provision for investment however the focus is on residential development.	Poor - due to loss of allotments	Fair - the option will create new public spaces and could facilitate the restoration of the Canal all of which can contribute to physical and mental well-being.	Very good - creation of a new canal quarter promoting new spaces and small specialist shops and restaurants.	Good - more housing provided	Neutral - no proposals	Neutral - no proposals	Good - public consultation procedures are being followed through the AAP process. The AAP will prompt new development in the area that will create valuable public spaces open to the community.
Option 5	Neutral - no proposals in place	Fair - provides opportunity for new jobs but does not include creative and knowledge based industry.	Neutral - no proposals in place	Fair - would lead to an increased pressure on the road network and also an increase in freight traffic. The size of the plot could also restrict the potential to improve pedestrian and cycle links through the area. However, access to retail and associated services would be increased for nearby residents.	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Fair - some investment however no provision for open space, residential or knowledge based investment.	poor/fair - no provisions for biodiversity. Development could have a negative impact on built and natural environment.	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place	Neutral - no proposals in place

Appendix F

Junction Capacity Analysis

F1.1 Junction Capacity Analysis - Methodology

F1.2 Introduction

We have undertaken analysis to assess the likely impact of the development on the local highway network in capacity terms. Details of the assessment are described below. While the Preferred Options have been developed in some detail there are still a number of unknowns as to the levels and locations of various aspects of the development as this is an AAP rather than a detailed planning application. In particular, the assessment of junctions is affected by the nature of the mixed uses in the Canal Head area. An assumption has therefore had to be made of the split and the nature of the A1-A4 uses proposed in the area. For the purposes of this assessment we have assumed that of the A1-A4 uses 20% are A1 (shops), 20% are A2 (financial and professional services), 50% are A3 (restaurants) and 10% are A4 (pubs). However, should these assumptions change, then the outcome of the junction assessments would also change accordingly.

F1.3 Scope of Assessment

The geographical scope of the assessment is as follows:

- Bridge Street/Aynam Road;
- Aynam Road/Queen Katherine Street;
- Aynam Road/Sunnyside;
- Aynam Road/Aynam Place;
- Aynam Road/Nether Street/Kirkland; and
- Lound Road/Parkside Road.

Two assessment periods have been considered:

- AM peak period (08:00-09:00); and
- PM peak period (17:00-18:00).

F1.4 Base Traffic Flows

Manual classified counts were undertaken at the six junctions listed above by a specialist traffic survey company. The flows were converted to Passenger Car Units using the following factors:

- Motorcycle - 0.4;
- Car/LGV – 1.0;
- HGV – 2.3; and
- Bus/coach – 2.0.

The base flows for each of the junctions are shown on Figures F1 and F2.

The TEMPRO database was used to obtain growth factors to a future reference case of 2012. The factors for each time period were as follows:

- AM peak period - 0.992; and
- PM peak period – 1.010.

The resulting reference case flows are shown in Figures F3 and F4.

F1.5 Trip Generation

The overall mix of land-uses within the AAP area used within the assessment is as follows:

- 6,670m² A1-A4 retail uses;
- 3,589m² B1 office use;
- 2,500m² B2 industrial use;
- 40 bed hotel;
- 385 residential apartments; and
- 156 residential houses.

The TRICS database has been used to produce indicative trip rates associated with each of these land uses. As a means of trip profiling, sites within Greater London were excluded as were suburban sites. The resulting trip rates are shown in the table below:

Table F1: Trip Rates for Land Uses within Development

Land Use	Units	Trip Rate			
		AM		PM	
		Arrivals	Departures	Arrivals	Departures
A1 - Shops	m^2	2.30	1.80	4.84	5.61
A2 - Financial and Professional Services	m^2	1.05	0.12	0.21	0.88
A3 - Restaurants	m^2	0.00	0.00	1.86	0.65
A4 - Pubs	m^2	0.00	0.00	3.44	2.42
B1 - Offices	m^2	1.05	0.12	0.21	0.88
B2 - Industrial	m^2	0.29	0.07	0.06	0.35
C1 - Hotel	beds	0.15	0.19	0.19	0.13
C3 - Residential (Apts)	units	0.06	0.23	0.21	0.10
C3 - Residential (Houses)	units	0.15	0.42	0.44	0.24

The AAP area has been split into 19 plots labelled 1A-6B. For each plot area there is an indicative land use schedule that forms part of the overall mix of land uses in the AAP area. For the purposes of this assessment, each plot area was assumed to access the highway network at one of the six junctions in the assessment based upon the best available information at the time. This resulted in the trip generation contained within Tables: F2-F7.

Table F2: Vehicle Trips Generated by Bridge Street Plots (1A, 1B, 1C, 1D, 2A, 3A, 3B)

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	934	m2	21	17	45	52
A2 - Financial and Professional Services	934	m2	10	1	2	8
A3 - Restaurants	2,335	m2	0	0	44	15
A4 - Pubs	467	m2	0	0	16	11
B1 - Offices	2,489	m2	26	3	5	22
B2 - Industrial	0	m2	0	0	0	0
C1 - Hotel	40	beds	6	8	8	5
C3 - Residential (Apts)	301	units	18	70	63	31
C3 - Residential (Houses)	54	units	8	23	24	13
		Total	**90**	**122**	**208**	**159**

Table F3: Vehicle Trips Generated by Queen Katherine Street Plots (1E, 2B)

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	400	m2	9	7	19	22
A2 - Financial and Professional Services	400	m2	4	0	1	4
A3 - Restaurants	1,000	m2	0	0	19	6
A4 - Pubs	200	m2	0	0	7	5
B1 - Offices	600	m2	6	1	1	5
B2 - Industrial	0	m2	0	0	0	0
C1 - Hotel	0	beds	0	0	0	0
C3 - Residential (Apts)	84	units	5	19	18	9
C3 - Residential (Houses)	0	units	0	0	0	0
		Total	**25**	**28**	**65**	**51**

Table F4: Vehicle Trips Generated by Sunnyside/Parr Street Plots (3C, 3D, 4A, 4B)

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	0	m2	0	0	0	0
A2 - Financial and Professional Services	0	m2	0	0	0	0
A3 - Restaurants	0	m2	0	0	0	0
A4 - Pubs	0	m2	0	0	0	0
B1 - Offices	0	m2	0	0	0	0
B2 - Industrial	0	m2	0	0	0	0
C1 - Hotel	0	beds	0	0	0	0
C3 - Residential (Apts)	0	units	0	0	0	0
C3 - Residential (Houses)	24	units	4	10	11	6
		Total	**4**	**10**	**11**	**6**

Table F5: Vehicle Trips Generated by Aynam Place (Plot 5A)

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	0	m^2	0	0	0	0
A2 - Financial and Professional Services	0	m^2	0	0	0	0
A3 - Restaurants	0	m^2	0	0	0	0
A4 - Pubs	0	m^2	0	0	0	0
B1 - Offices	0	m^2	0	0	0	0
B2 - Industrial	0	m^2	0	0	0	0
C1 - Hotel	0	beds	0	0	0	0
C3 - Residential (Apts)	0	units	0	0	0	0
C3 - Residential (Houses)	14	units	2	6	6	3
		Total	**2**	**6**	**6**	**3**

Table F6: Vehicle Trips Generated by Nether Street Plots (5B, 5C)

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	0	m^2	0	0	0	0
A2 - Financial and Professional Services	0	m^2	0	0	0	0
A3 - Restaurants	0	m^2	0	0	0	0
A4 - Pubs	0	m^2	0	0	0	0
B1 - Offices	0	m^2	0	0	0	0
B2 - Industrial	0	m^2	0	0	0	0
C1 - Hotel	0	beds	0	0	0	0
C3 - Residential (Apts)	0	units	0	0	0	0
C3 - Residential (Houses)	46	units	7	19	20	11
		Total	**7**	**19**	**20**	**11**

Table F7: Vehicle Trips Generated by Parkside Road Plots (6A, 6B)

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	0	m^2	0	0	0	0
A2 - Financial and Professional Services	0	m^2	0	0	0	0
A3 - Restaurants	0	m^2	0	0	0	0
A4 - Pubs	0	m^2	0	0	0	0
B1 - Offices	500	m^2	5	1	1	4
B2 - Industrial	2,500	m^2	7	2	2	9
C1 - Hotel	0	beds	0	0	0	0
C3 - Residential (Apts)	0	units	0	0	0	0
C3 - Residential (Houses)	18	units	3	8	8	4
		Total	**15**	**10**	**11**	**18**

The overall trip generation from the AAP area is obtained by adding all of the above together and results in the following total trip generation:

Table F8: Vehicle Trips Generated by Development in Total

Land Use	Quantity	Units	AM		PM	
			Arrivals	Departures	Arrivals	Departures
A1 - Shops	1,334	m^2	31	24	65	75
A2 - Financial and Professional Services	1,334	m^2	14	2	3	12
A3 - Restaurants	3,335	m^2	0	0	62	22
A4 - Pubs	667	m^2	0	0	23	16
B1 - Offices	3,589	m^2	38	4	8	32
B2 - Industrial	2,500	m^2	7	2	2	9
C1 - Hotel	40	beds	6	8	8	5
C3 - Residential (Apts)	385	units	23	89	81	39
C3 - Residential (Houses)	156	units	23	65	69	38
		Total	**142**	**193**	**319**	**247**

F1.6 Distribution

The generated trips were distributed onto the highway network by giving consideration to the volumes of traffic using the six main routes into and out of Kendal town centre, i.e.:

- A5284 Windermere Road;
- A6 Shap Road;
- A685 Appleby Road;
- A684 Sedbergh Road;
- A65 Burton Road; and
- A6 Milnthorpe Road.

Inbound and outbound traffic flows on these routes were obtained from the Cumbria County Council (CCC) TRADS system. ATC data was obtained for a common date (Thursday 19 April 2007) as shown in Figures F5 and F6.

The proportion of total inbound and outbound traffic using each of the routes was then calculated and is presented on Figures F7 and F8. Generated traffic arriving at and departing from the AAP area was assumed to do so in the same proportion as these existing flows using the most logical route available.

Due to the length of the AAP area and the number of access points, separate distributions were calculated for each of the six access points. These are shown in Figures F9-F20.

The trip generations in the tables above were then combined with the distributions in Figures F9-F20 to assign generated traffic to the network. The resulting development generated trips are shown in Figures F21 and F22.

The development generated traffic in Figures F21 and F22 was then added to the base traffic in Figures F1 and F2 in order to calculate the forecast future traffic flows shown in Figures F23 and F24.

F2 Junction Capacity Analysis - Results

F2.1 Junction 1 – Bridge Street/Aynam Road

This junction is forecast to experience the highest increase in traffic flows. This is due to the fact that the majority of the development within the AAP area would be accessed from Bridge Street. The assessment has assumed that this junction would be the primary access for plots 1A-1D, 2A and plots 3A-B. The main constraint at this junction is the fact that the major road narrows considerably at the junction creating a bottleneck for the two lanes of traffic forcing them into a single lane as they pass the junction and then reforming two lanes to the south. The modelling of the junction has used this narrowest point as the major road width in order to reflect this constraint rather than using the TRL advice of measuring the road width either side of the junction and taking an average.

In the reference case scenario, this junction is forecast to operate well within capacity. As the flows into and out of Bridge Street are relatively low (less than 100 vehicles per hour) there is negligible queuing and delay at the junction in either peak period. The highest ratio of flow to capacity (RFC) observed is 35% on Bridge Street in the PM peak period.

The level of proposed development with the area in the Preferred Options would significantly increase the number of trips attracted to and from the development, especially in the evening peak period. As a result, the forecast queuing and delay at the junction would increase. In the AM peak period, the junction is forecast to continue to operate within capacity. The highest observed RFC is 33% on Bridge Street with an associated queue of one vehicle.

In the evening peak, the junction is forecast to experience some capacity issues with the forecast levels of generated development traffic. The RFC on Bridge Street reaches 104% and the associated queue reaches 14 vehicles. This would suggest that the level of proposed development is at or around the maximum that could be supported by the junction in its current form. As stated previously, the assessment relies on a number of assumptions that have had to be made given the current level of detail of the design. As the design progresses and further detail is established, the revised assessment of the junction may show that the junction can cope with the level of forecast traffic, should it turn out to be lower than that assessed. For example, a reduction in forecast flows on Bridge Street by 10% would reduce the forecast RFC to a more acceptable level of 93% with a queue of seven vehicles. However, if the level of traffic generated by the development remains at the current forecast level or increases, it may be necessary to resolve the bottleneck issue at the junction. If the narrow point on Aynam Road was widened to match the widths either side of the junction, the RFC would reduce to 86% with a queue of five vehicles.

A number of options are available in order to facilitate this widening. The simplest option would be to change the road markings and set back the give way line on Bridge Street, thus widening this section of Aynam Road. However, the resulting alignment of Aynam Road would suffer and, as a result, traffic may continue to narrow to a single lane. An alternative would be to widen the road on the west side at the expense of the footway. An additional 1.3m of road width could be achieved in this manner, although the pedestrian footway on the west side of Miller Bridge would be sacrificed. While this would reduce pedestrian accessibility between the development and the town centre, proposals for a new pedestrian footbridge as part of the KeRAP report would provide an alternative route for pedestrians.

If the pedestrian footway on this side of the road were to be retained, the bridge would have to be modified and widened at its southern end. There are a range of issues that are likely to make this option impractical including cost, engineering feasibility and aesthetics. The most extreme solution would be to replace Miller Bridge completely with a new, wider structure so that two traffic lanes could form for the entire length of the route. Again, cost, aesthetics and planning issues may make this an impractical solution.

A summary of the assessment results for Junction 1 are shown in the Table below:

Table F9: Summary of Junction Capacity Analysis at Junction 1

Junction Arm	AM Peak Period				PM Peak Period			
	Reference Case		'With Development' Case		Reference Case		'With Development' Case	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Bridge Street	8%	0	35%	1	33%	1	104%	14

F2.2 Junction 2 – Aynam Road/Queen Katherine Street

The assessment has assumed that this junction would be the primary access for plot 1E. This plot would be forecast to generate a more modest level of traffic than those accessed via Bridge Street.

In the reference case scenario there is minimal traffic that uses this street with only approximately 10 trips in either direction in both peaks. As a result, the assessment shows that there is minimal queuing and delay at the junction. In the AM peak period the highest forecast RFC is 2% and in the PM peak it is only 3%. No queues are forecast at the junction.

The proposed development would generate approximately 20-30 trips in each direction in the AM peak period and 50-60 trips in each direction in the PM peak period. Overall traffic flows on Queen Katherine Street would therefore remain low. Accordingly the RFCs forecast in the AM and PM peak periods only rise to 9% and 20% respectively. Queues would remain nominal.

Therefore the junction would not be materially affected by the proposed level of development.

A summary of the assessment results for Junction 2 are shown in the Table below:

Table F10: Summary of Junction Capacity Analysis at Junction 2

Junction Arm	AM Peak Period				PM Peak Period			
	Reference Case		'With Development' Case		Reference Case		'With Development' Case	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Queen Katherine Street	2%	0	9%	0	3%	0	20%	0

F2.3 Junction 3 – Aynam Road/Sunnyside

The assessment has assumed that this junction would be the primary access for plots 3D, and the potential development sites 4A and 4B.

In the reference case scenario there is only a modest volume of traffic that uses this street, with approximately 20-30 trips in either direction in both peaks. As a result, the assessment shows that there is minimal queuing and delay at the junction. In the AM peak period the highest forecast RFC is 4% and in the PM peak it is only 9%. No queues are forecast at the junction.

As the Preferred Options does not include development on the allotments, this area would generate maximum flows of less than 10 trips in each direction per peak. Overall traffic flows on Sunnyside would therefore only increase by a modest amount. The forecast RFCs in the AM and PM peak periods rise to 7% and 12% respectively. Queues would remain nominal.

Therefore the junction would not be materially affected by the proposed level of development.

A summary of the assessment results for Junction 3 are shown in the Table below:

Table F11: Summary of Junction Capacity Analysis at Junction 3

Junction Arm	AM Peak Period				PM Peak Period			
	Reference Case		'With Development' Case		Reference Case		'With Development' Case	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Sunnyside	4%	0	7%	0	9%	0	12%	0

F2.4 Junction 4 – Aynam Road/Aynam Place

The assessment has assumed that this junction would be the primary access for plot .

In the base scenario there is only a minimal volume of traffic that uses Aynam Place with less than 10 trips in either direction in both peaks. As a result, the assessment shows that there is minimal queuing and delay at the junction. In the both peak periods the highest forecast RFCs are 2%. No queues are forecast at the junction.

The proposed development would generate less than 10 trips in each direction per peak. Overall traffic flows on Aynam Place would therefore only increase by a minimal amount. The highest forecast RFC in the AM and PM peak periods is 3%. Queues would remain nominal.

Therefore the junction would not be materially affected by the proposed level of development.

A summary of the assessment results for Junction 4 are shown in the Table below:

Table F12: Summary of Junction Capacity Analysis at Junction 4

Junction Arm	AM Peak Period				PM Peak Period			
	Reference Case		'With Development' Case		Reference Case		'With Development' Case	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Aynam Place	2%	0	3%	0	2%	0	3%	0

F2.5 Junction 5 – Aynam Road/Nether Street/Kirkland/Lound Road

Due to the layout of this junction and the one-way nature of Aynam Road and Kirkland, it is not possible to model this junction using PICADY (in PICADY, one-way major roads can only be modelled at T-junctions or staggered junctions, and not at crossroads) this junction has been modelled using LINSIG. LINSIG is primarily used to assess signalised junctions.

However, it can also model give way links and the pedestrian crossing across Aynam Road provides a suitable two stage modelling scenario.

The assessment has assumed that this junction would be the primary access for plots 5B and 5C. While only minimal traffic flows are forecast to use Nether Street both in the reference and development case scenarios, the primary impact upon this junction is likely to arise due to increased flows on Aynam Road (ahead movement). In the AM peak period, an additional 52 vehicles are forecast to make this movement, increasing to 80 vehicles in the PM peak. In addition, flows along Lound Road are anticipated to increase significantly in both peaks.

As stated above, the modelling has assumed a two stage scenario. In the first stage, ahead-flows on Aynam Road and the left turn on Lound Street are modelled as major links with Nether Street and the right turn from Aynam Road modelled as give way links. In the second stage, it is assumed that there are pedestrians crossing and therefore all traffic on Aynam Road is stopped. Traffic on Lound Street and Nether Street is modelled in the same way as in stage 1.

In the reference case scenario, the assessment shows that there is minimal delay and moderate queues. In the AM peak period the highest observed RFC is 28% and the maximum observed queue three vehicles. In the PM peak period the highest observed RFC is 44% and the highest observed queue is eight vehicles on Aynam Road. This is likely to be a pessimistic assessment as it assumes that traffic is stopped at the pedestrian crossing for 10% of the time.

With the proposed development in place, traffic flows on Nether Street would not increase significantly and the increased flows on Aynam Road and Lound Road would be unopposed. Therefore, there would only be a marginal change in the performance of the junction with highest forecast RFC in the AM and PM peak periods increasing to 38% and 59% respectively. The forecast maximum queues would increase slightly to three and nine vehicles respectively.

The effect of the development upon the performance of the junction is to increase queuing and delay. However, the junction is still operating within capacity in both peak periods. Therefore no mitigation measures are proposed at this junction at present.

A summary of the assessment results for Junction 5 are shown in the Table below:

Table F13: Summary of Junction Capacity Analysis at Junction 5

Junction Arm	AM Peak Period				PM Peak Period			
	Reference Case		'With Development' Case		Reference Case		With Development Case	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Aynam Road (ahead/left)	20%	3	24%	3	44%	8	49%	9
Aynam Road (right)	28%	2	38%	3	44%	4	59%	6
Lound Road	24%	0	27%	0	19%	0	24%	0
Nether Street	1%	0	4%	0	1%	0	3%	0

F2.6 Junction 6 – Lound Road/Parkside Road

The assessment has assumed that this junction would be the primary access for plot 6A and 6B.

In the reference case scenario this is a relatively busy junction providing access to the east of Kendal. The assessment shows that in the AM peak period the respective RFCs on Parkside Road and Lound Road are 46% and 73% respectively. The associated queues

are one and three vehicles respectively. In the PM peak period the RFCs on the two roads are slightly higher at 59% and 83% with queues of one and four vehicles.

The proposed development would generate between 120 and 200 additional vehicle movements through the junction in the respective peaks. The effect on queuing and delay at the junction is to increase the RFCs to 51% and 76% in the AM peak period with associated queues of one and three vehicles on the two arms. In the PM peak period the effect on RFCs is to increase them to 77% and 89% on Parkside Road and Lound Road respectively. The associated queues in the PM peak period are three and six vehicles respectively.

The effect of the development upon the performance of the junction is to increase queuing and delay. However, the junction is still operating within capacity in both peak periods. Therefore no mitigation measures are proposed at this junction at present.

A summary of the assessment results for Junction 6 are shown in the Table below:

Table F14: Summary of Junction Capacity Analysis at Junction 6

Junction Arm	AM Peak Period				PM Peak Period			
	Reference Case		'With Development' Case		Reference Case		With Development Case	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Parkside Road (Left-turn)	46%	1	51%	1	59%	1	76%	3
Parkside Road (Right-turn)	35%	1	44%	1	32%	1	61%	1
Lound Road (Right-turn)	73%	3	77%	3	83%	4	89%	6

F3 Junction Capacity Analysis - Conclusion

The assessment of the access junctions to the proposed developments has shown that the proposed level of development is appropriate for the local highway network.
Bridge Street/Aynam Road is the only junction that is forecast to experience capacity issues due to the development generated traffic. Therefore, it may be necessary to provide mitigation measures in this location. However, the detail of the mitigation measures required cannot be fully ascertained until there is greater certainty over the level and nature of the development proposed within the AAP area.

The junctions on Aynam Road at Queen Katherine Street, Sunnyside and Aynam Place are currently very lightly trafficked with all turning movements being less than 30 vehicles per hour. Therefore, there are currently significant levels of spare capacity at the junctions. Given the relatively low density of development proposed in these areas, the forecast increases in traffic are relatively modest. Therefore, no capacity issues are forecast at these junctions with the development in place.

The junction of Nether Street/Aynam Road/Lound Road has been modelled assuming that the traffic on Aynam Road is stopped to give way to pedestrians on the crossing for approximately 10% of the peak hours. As a result, the only significant queues forecast at the junction are on the ahead-movement on Aynam Road. However, the junction is still forecast to operate well within capacity. The introduction of development generated traffic at the junction would increase queuing and delay at the junction marginally but it would still be forecast to operate well within capacity.

The Parkside Road/Lound Road junction is a busy junction that is currently operating relatively close to capacity. With the development in place the forecast queuing and delay increases marginally. However, the junction is still forecast to be operating within capacity. With the current development proposals there is no mitigation required at this junction; however, should the nature of the proposals change and the traffic flows increase it may be necessary to provide some mitigation at the junction due to the current issues experienced.

Overall, therefore, the junctions assessed should be able to accommodate the forecast volumes of traffic generated by the development. Once the nature of the proposed development becomes defined in greater detail we will have greater confidence in the findings of the assessment. However, the only junction that is likely to require any form of mitigation is the junction of Bridge Street/Aynam Road. Depending upon the final level and nature of proposed development there may also need to be changes made to the Parkside Road/Lound Road junction; however, at present this is unlikely to be required.

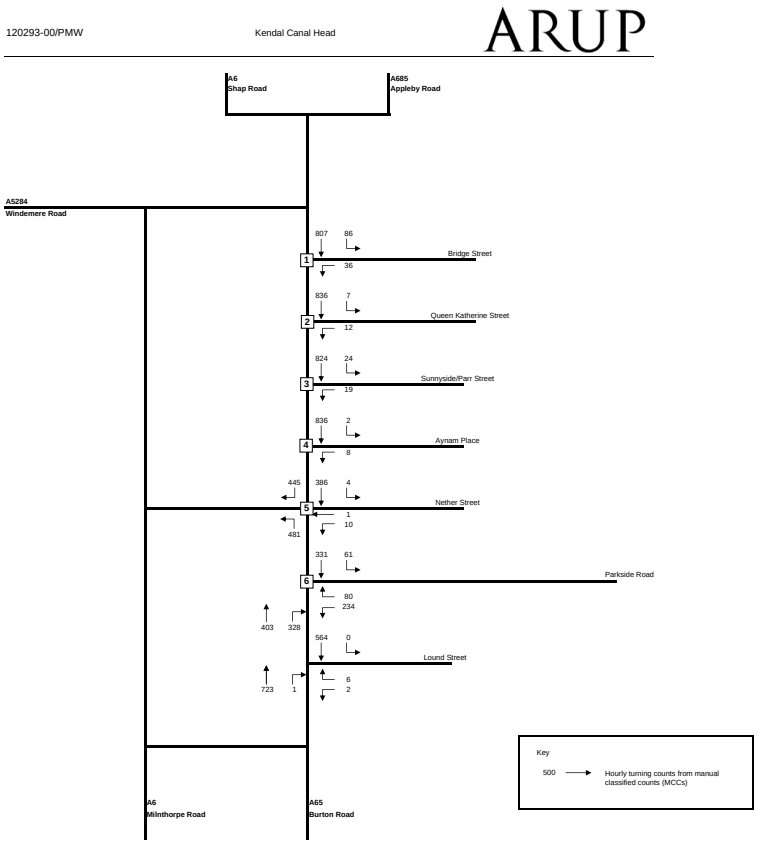

Figure F1 - 2007 Base Traffic Counts (08:00-09:00)

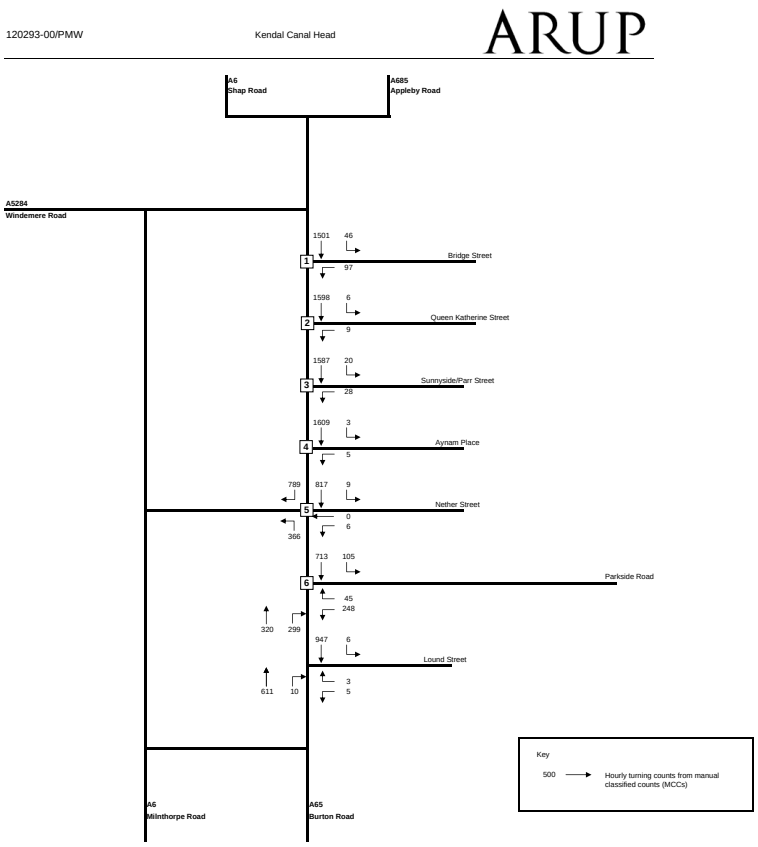

Figure F2 - 2007 Base Traffic Counts (17:00-18:00)

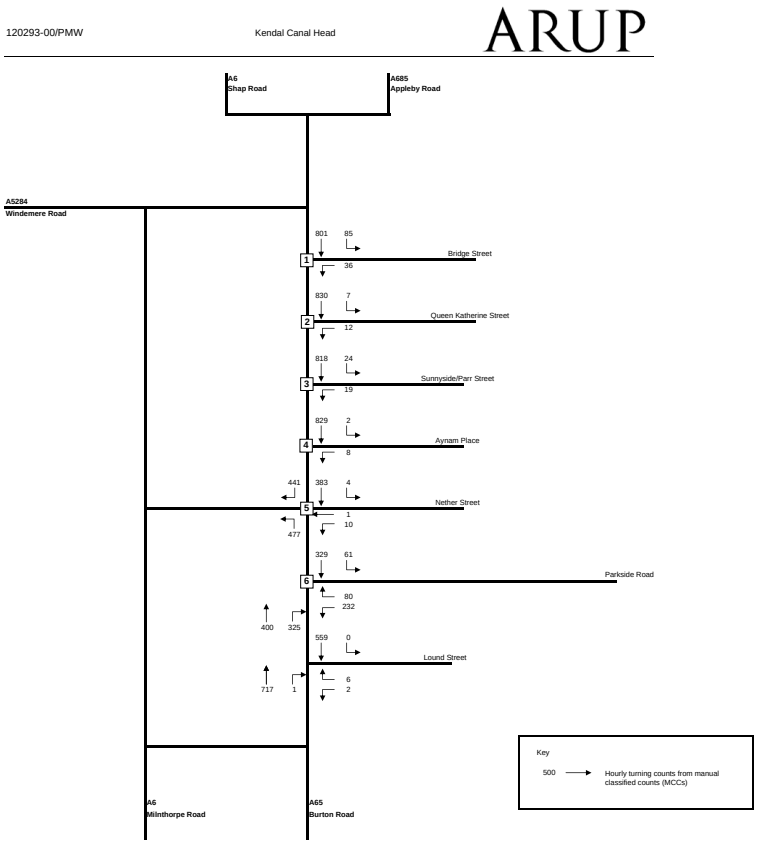

Figure F3 - 2012 Reference Case Traffic Counts (08:00-09:00)

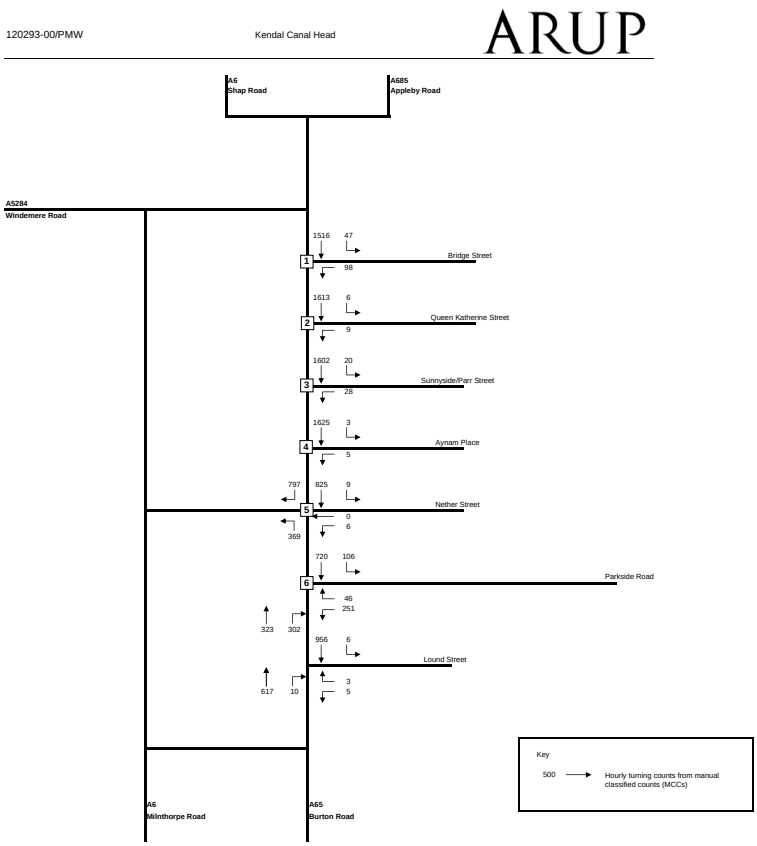

Figure F4 - 2012 Reference Case Traffic Counts (17:00-18:00)

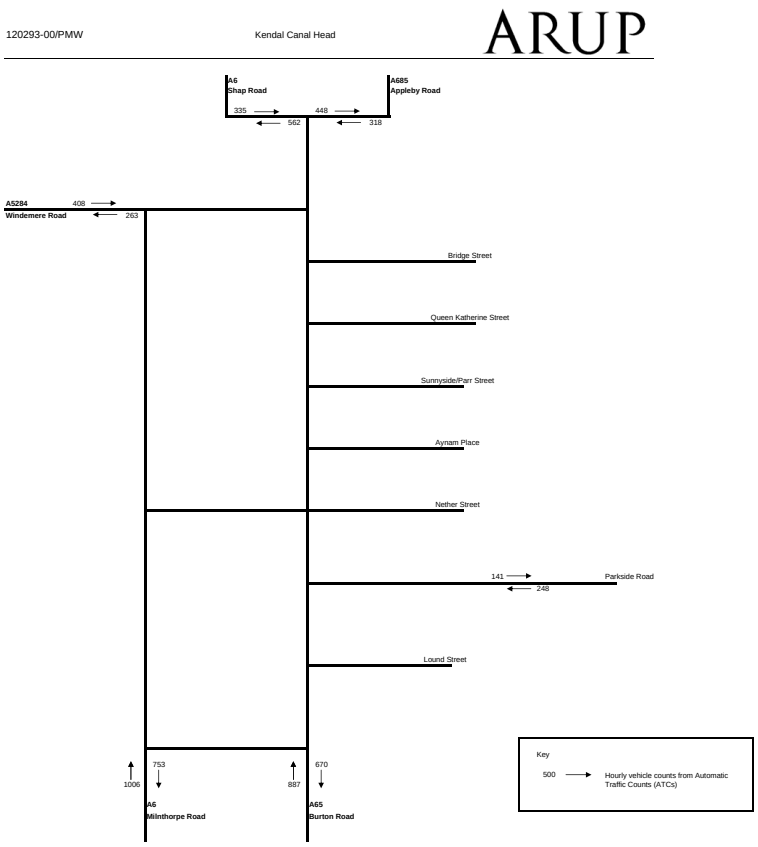

Figure F5 - ATC Counts on Approach Roads (08:00-09:00)

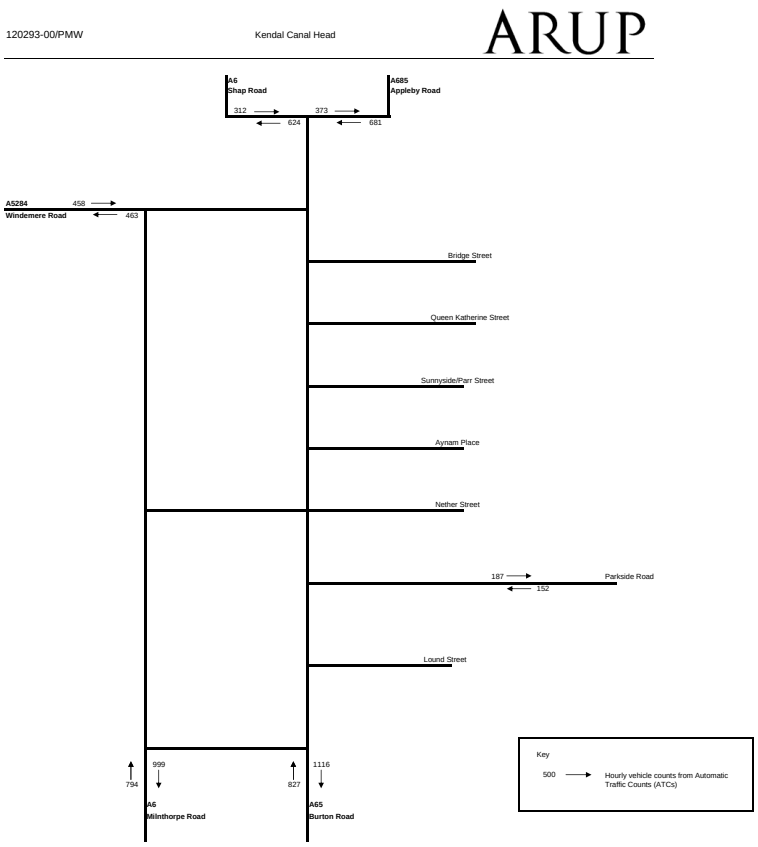

Figure F6 - ATC Counts on Approach Roads (17:00-18:00)

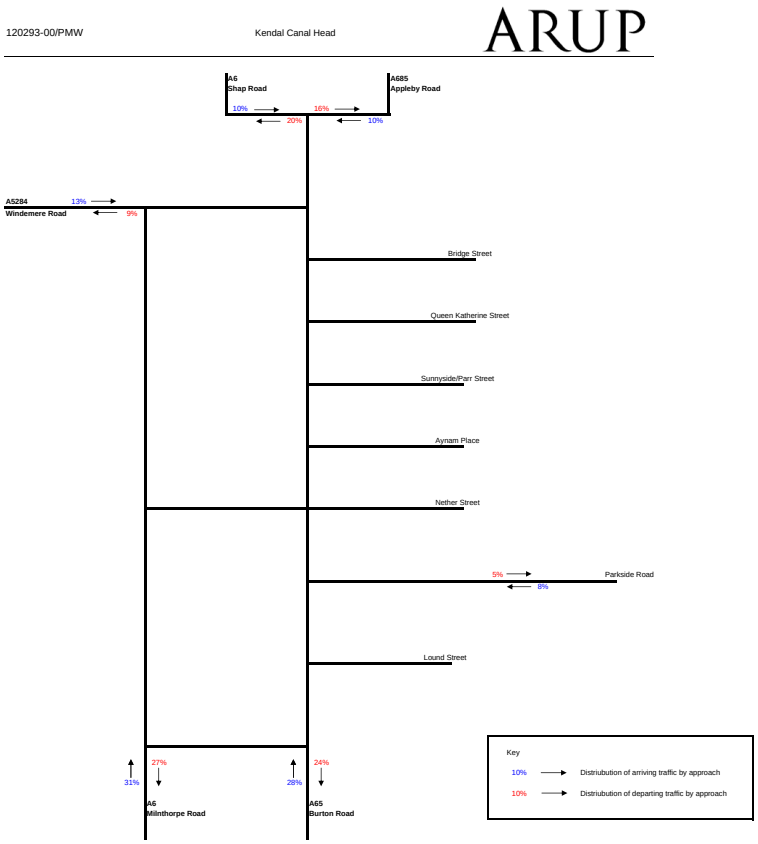

Figure F7 - Distribution of Traffic by Approach (08:00-09:00)

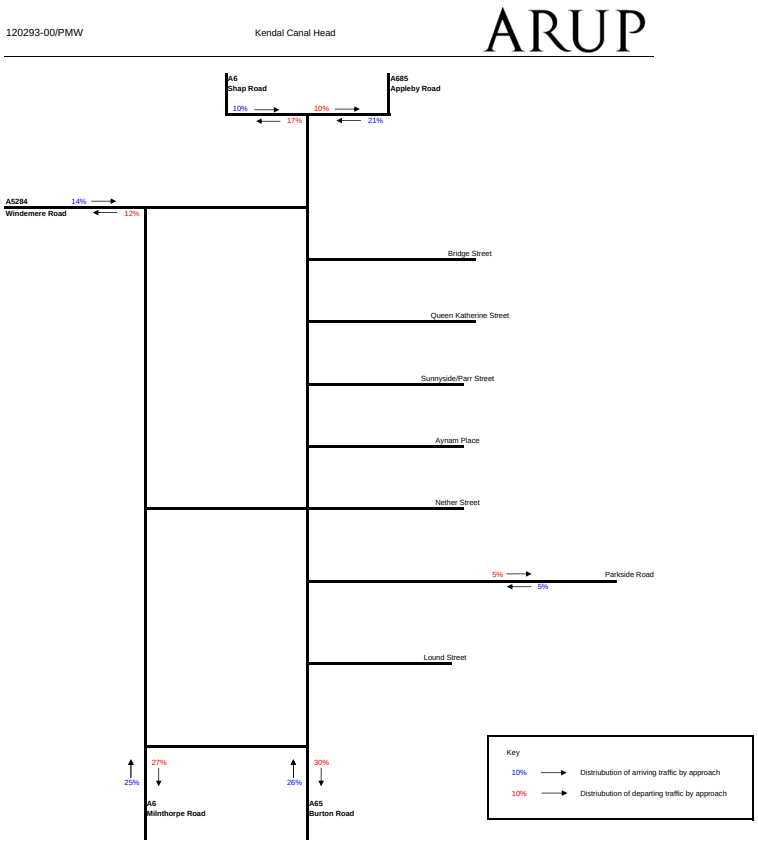

Figure F8 - Distribution of Traffic by Approach (17:00-18:00)

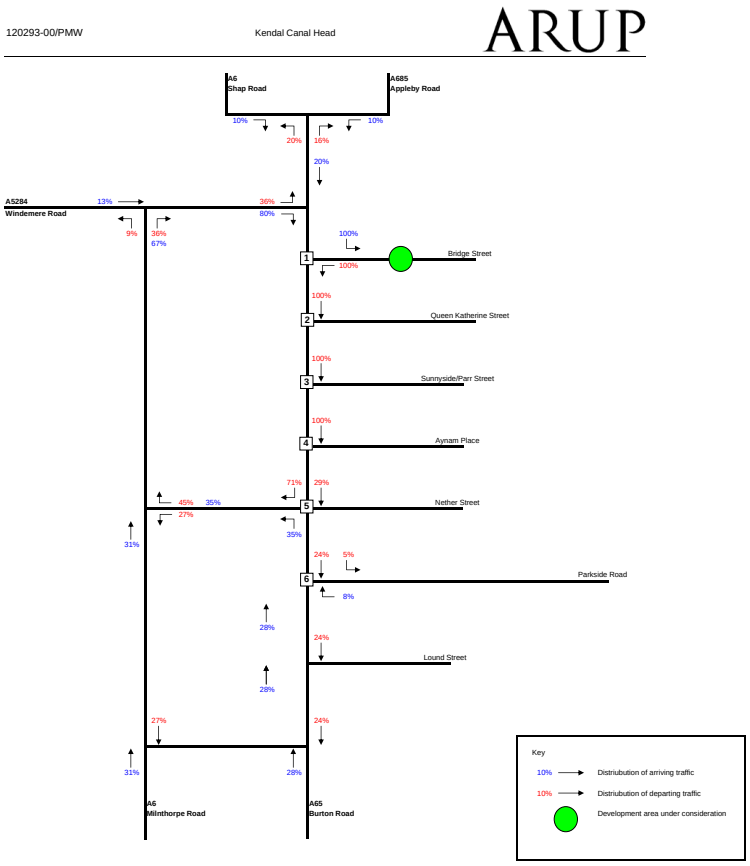

Figure F9 - Distribution of Bridge Street Traffic (08:00-09:00)

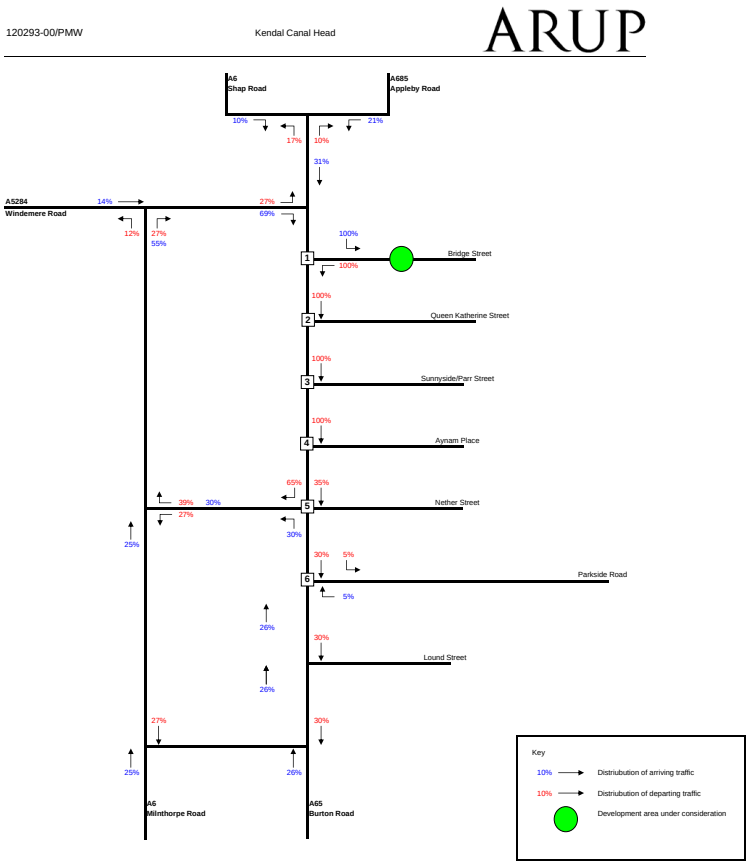

Figure F10 - Distribution of Bridge Street Traffic (17:00-18:00)

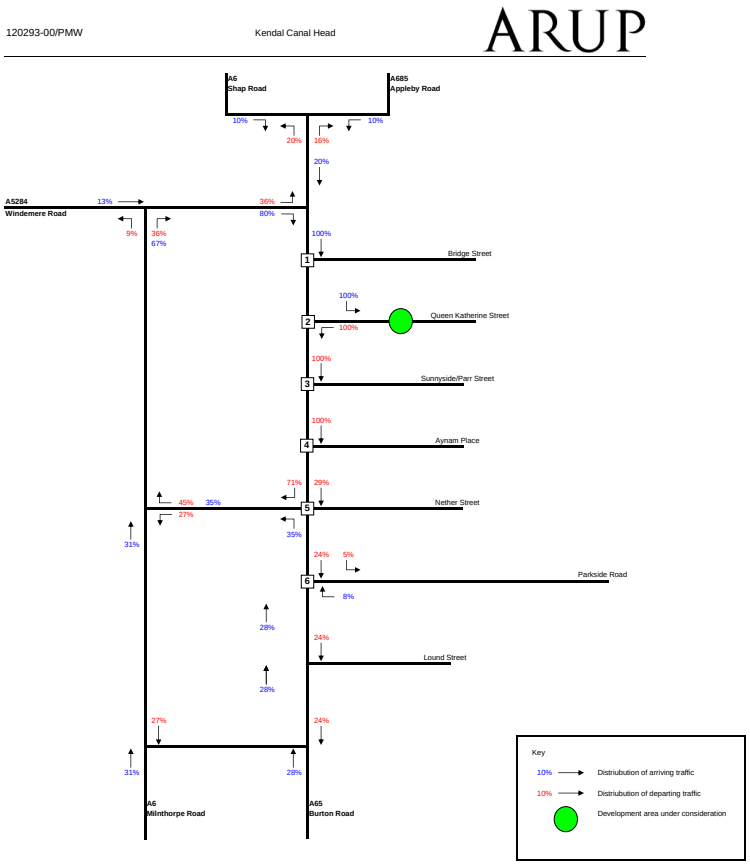

Figure F11 - Distribution of Queen Katherine Street Traffic (08:00-09:00)

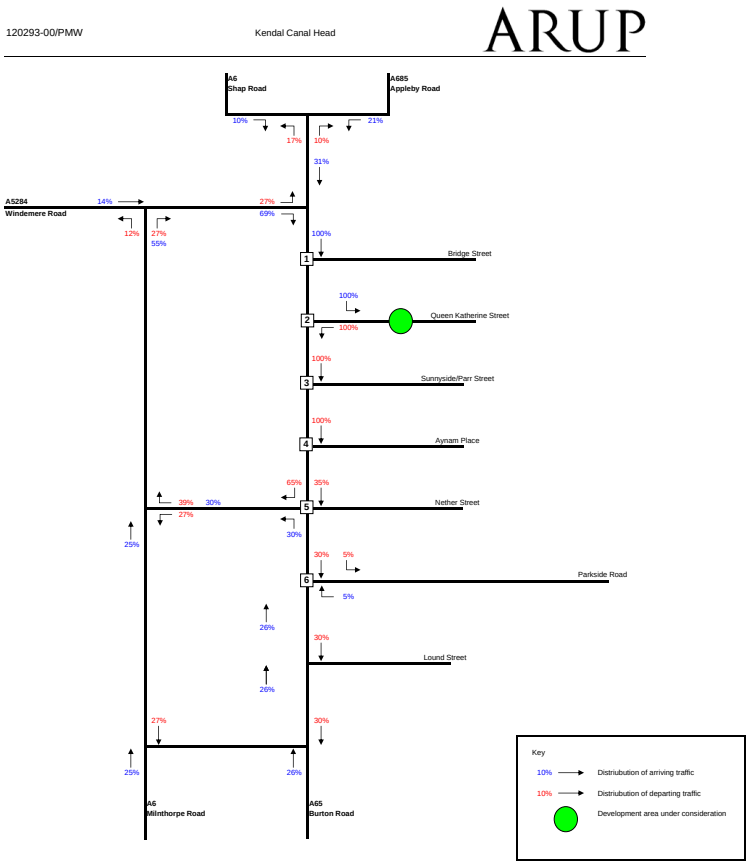

Figure F12 - Distribution of Queen Katherine Street Traffic (17:00-18:00)

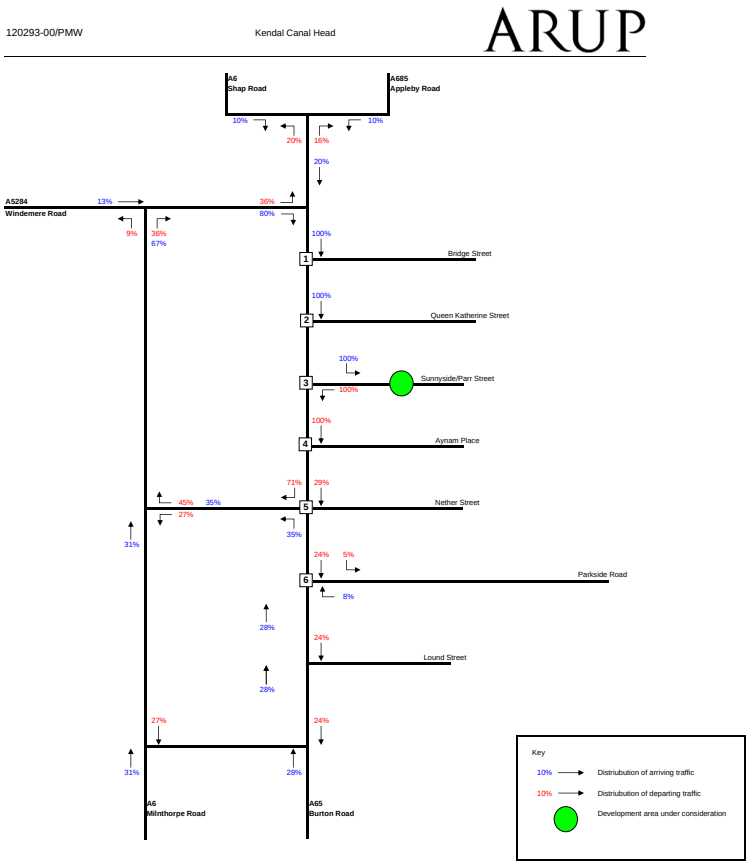

Figure F13 - Distribution of Sunnyside/Parr Street Traffic (08:00-09:00)

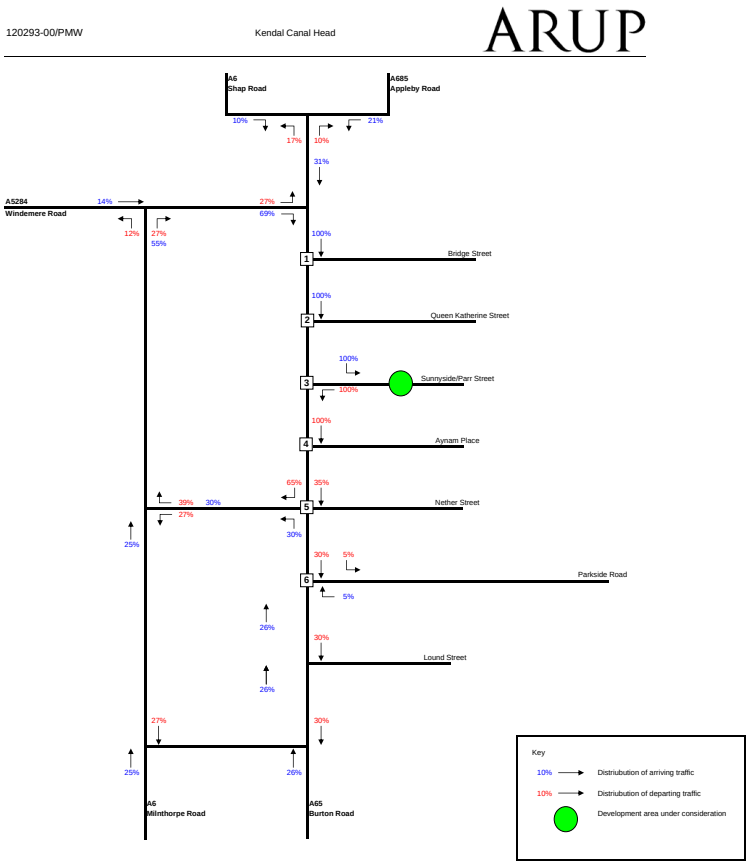

Figure F14 - Distribution of Sunnyside/Parr Street Traffic (17:00-18:00)

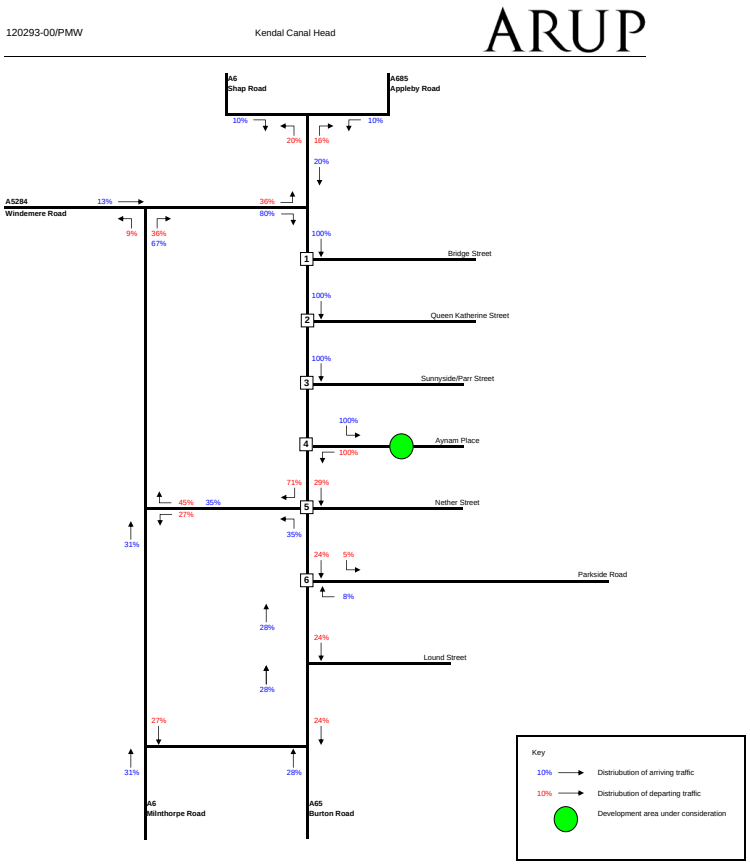

Figure F15 - Distribution of Aynam Street Traffic (08:00-09:00)

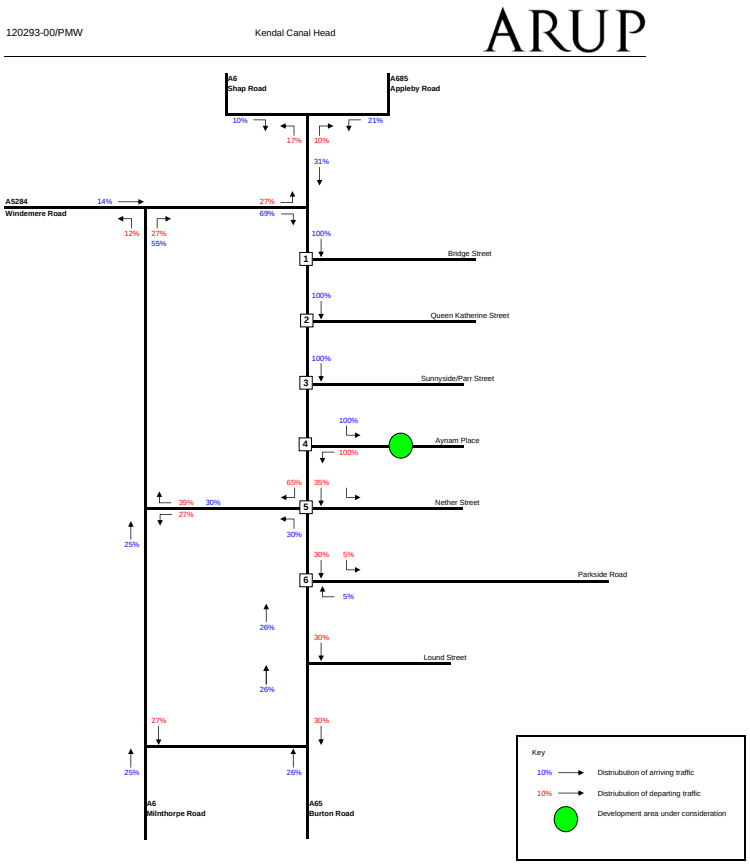

Figure F16 - Distribution of Aynam Street Traffic (17:00-18:00)

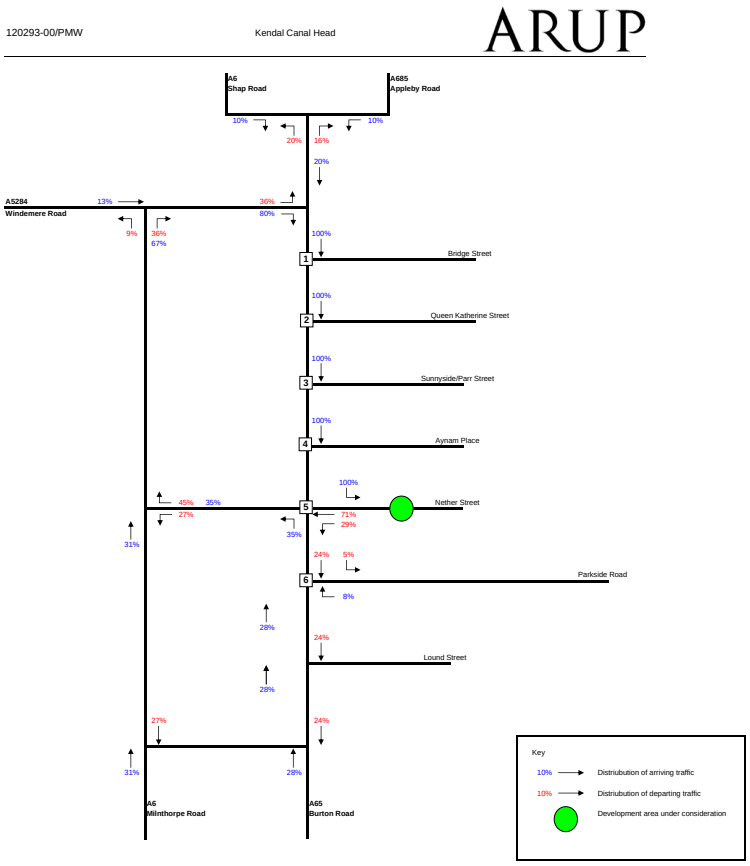

Figure F17 - Distribution of Nether Street Traffic (08:00-09:00)

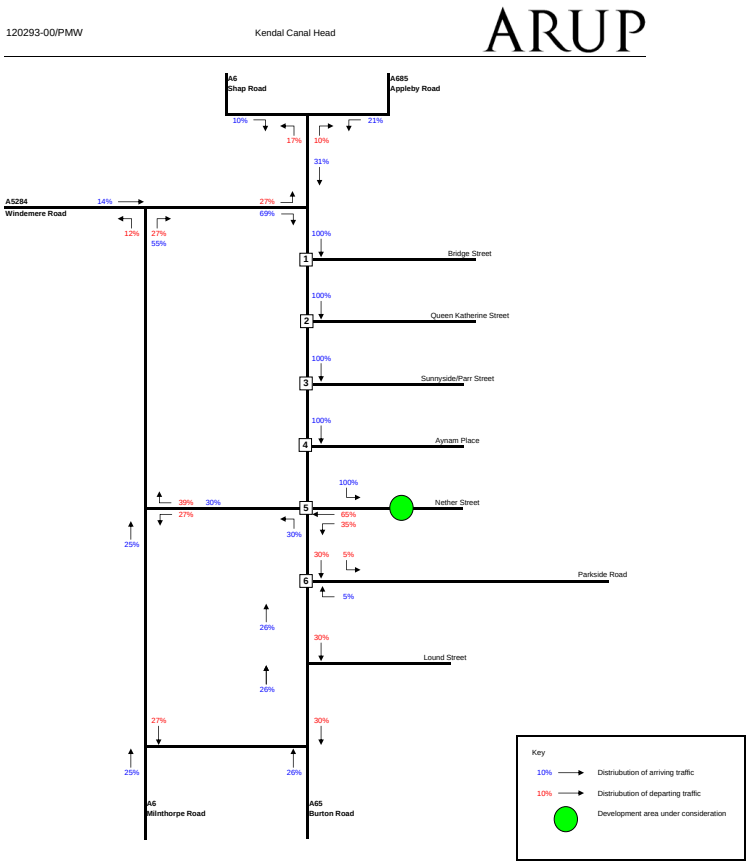

Figure F18 - Distribution of Nether Street Traffic (17:00-18:00)

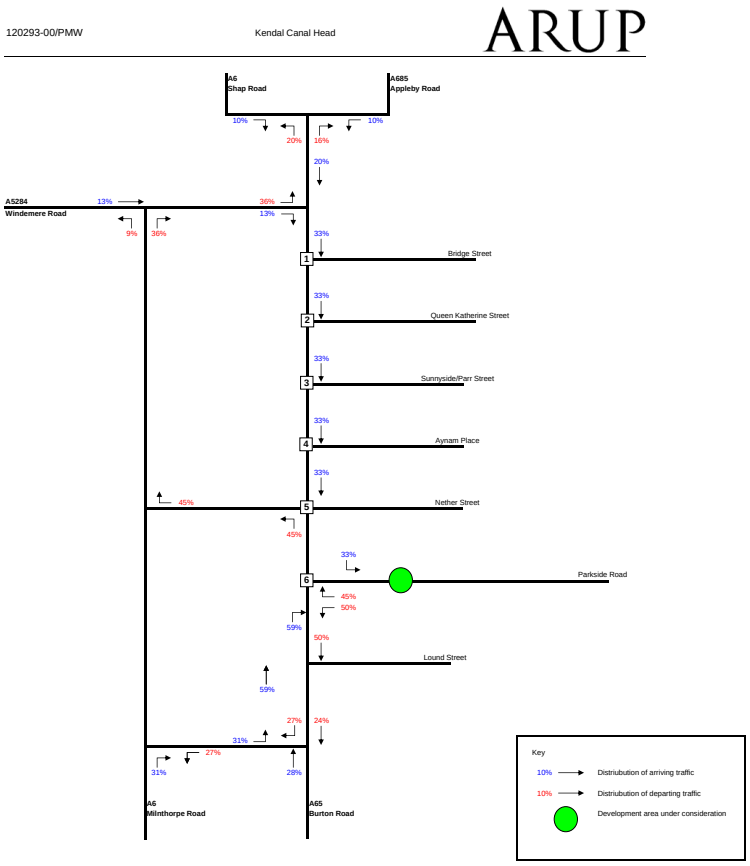

Figure F19 - Distribution of Parkside Road Traffic (08:00-09:00)

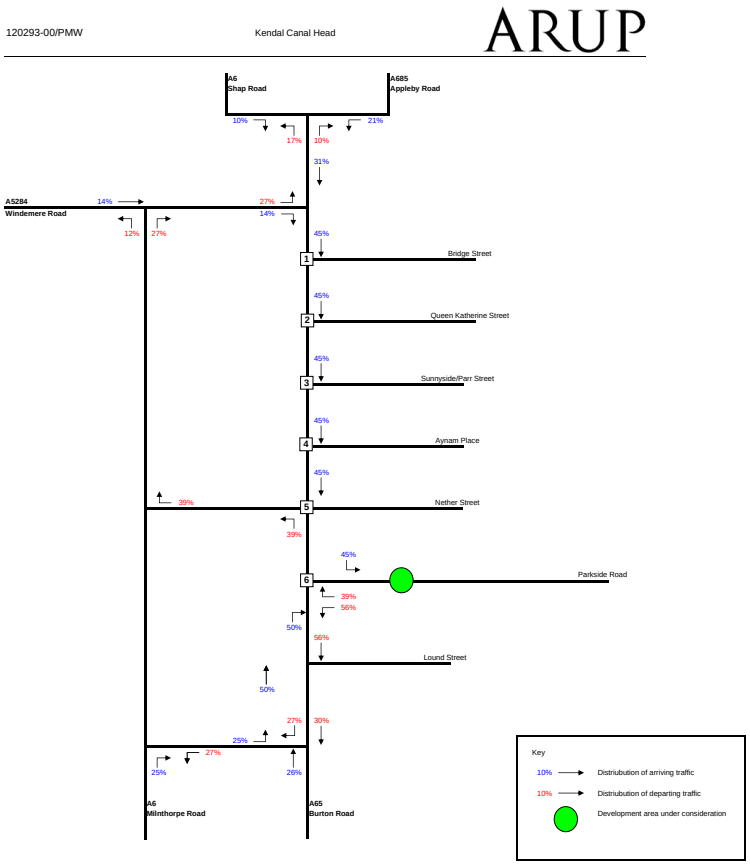

Figure F20 - Distribution of Parkside Road Traffic (17:00-18:00)

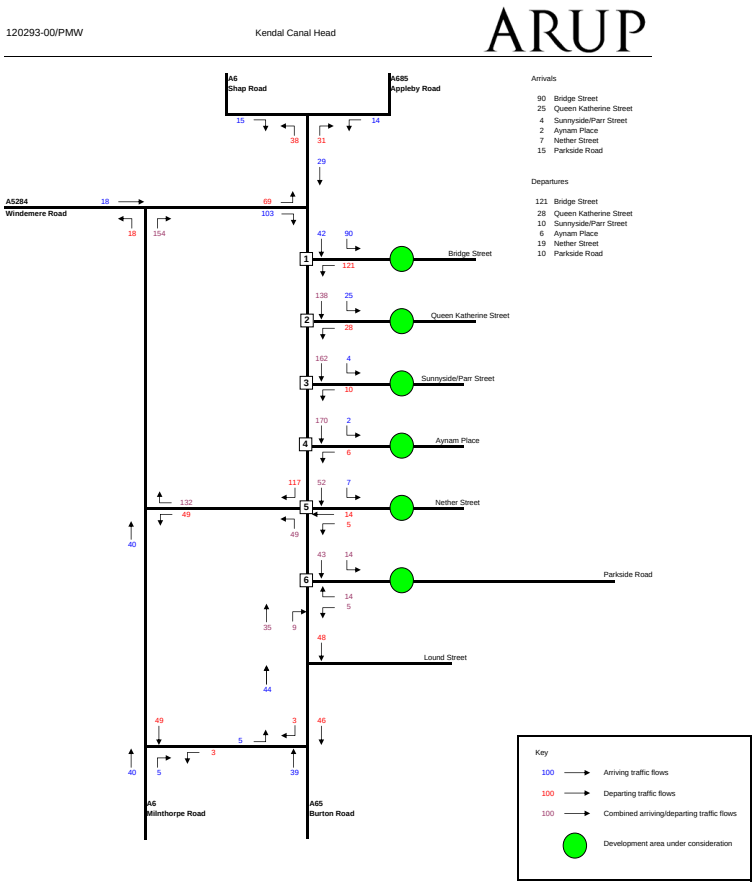

Figure F21 - Development Generated Traffic (08:00-09:00)

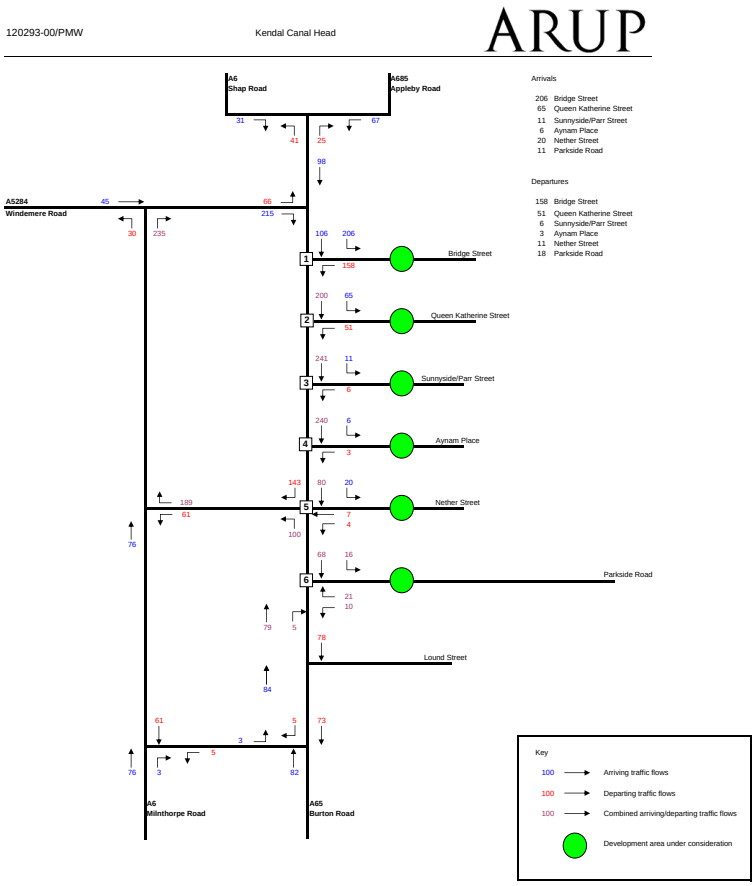

Figure F22 - Development Generated Traffic (08:00-09:00)

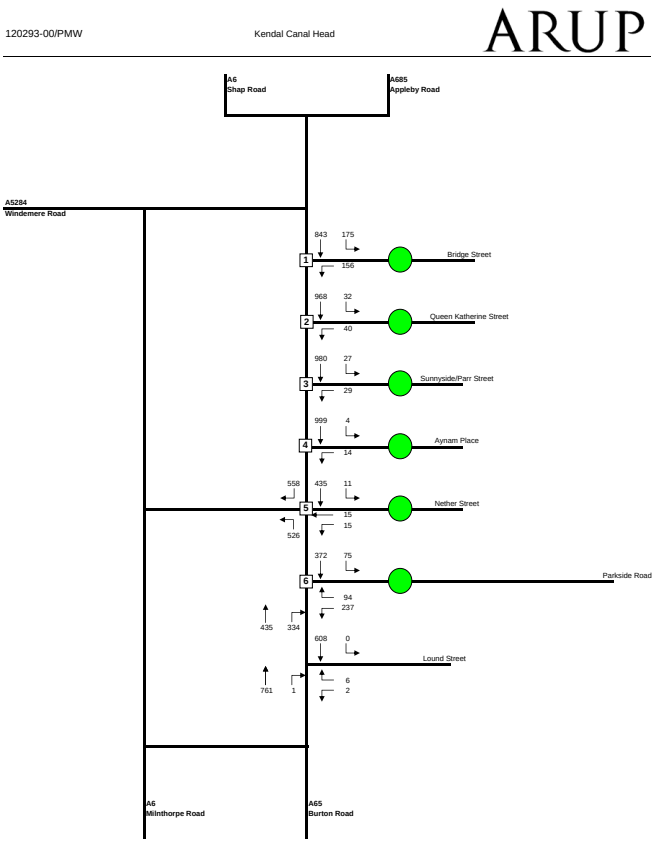

Figure F23 - 2012 Forecast Total Traffic (08:00-09:00)

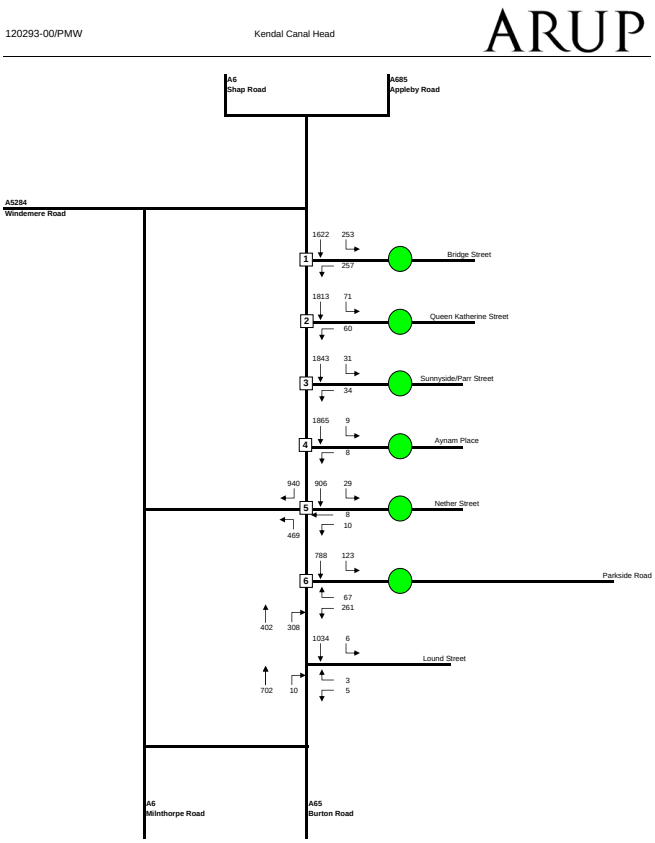

Figure F24 - 2012 Forecast Total Traffic (17:00-18:00)

Appendix G

Marina Viability Assessment

G Marina Viability Assessment

G1.1 Introduction

As part of the AAP process, careful consideration has been given to the provision of a Marina within the AAP area. It has been suggested that a marina could provide an alternative focus and source of animation for the Canal Head Area and would be an alternative to the proposed residential, retail, leisure and office uses proposed in the Preferred Option Base Scenario. Suggested sites for the marina have included the Canal Head itself, and the Parkside Road North sites 5b and 5c.

This option was discounted at an earlier stage in the project, due to the impact on the amount of land available for development, the economic viability of the marina itself and the wider strategy for the redevelopment of the Northern Reaches.

G1.2 Impact on Developable Land

A marina is land hungry and would have a substantial impact on the amount of land available for development. A small marina either at Parkside Road North or in the Canal Head would result in a loss of developable land and loss of dwellings and / or (depending upon the exact location) the loss of some of the proposed retail and office development.

Development, especially residential and retail development is providing a significant contribution towards the costs of restoration, therefore loss of development land has a direct impact on the overall profitability of the scheme. Two potential locations have been suggested. The effects of both are explored below:

G1.2.1 Marina at Parkside Road North

A marina at Parkside Road North would remove sites 5B and 5c from the development and result in:

- A loss of 0.76 hectares of residential land from the development.
- A reduction of 46 houses compared to the Preferred Option Base Scenario - resulting in an overall total of 493 dwellings
- A scheme even more heavily skewed towards apartments - with just 110 *houses* in total. Importantly, while SLDC require 70% of affordable dwellings to be *houses* that would leave just 6 private houses on the whole scheme.
- The effect of this amendment to the Preferred Option Base Scenario is to reduce the final development value from £4.54m to £3.41m - *all other things being equal*. Developing sites 5b and 5c for residential, specifically new housing, contributes around £1.1m profit towards the reinstatement of the canal.

G1.2.2 Marina at Canal Head

A similar sized marina within the Canal Head itself, located at sites 1c and 1d would result in:

- A loss of 0.77 hectares of residential land from the development
- A reduction of 99 apartments compared to the Preferred Option Base Scenario - resulting in an overall total of 440 dwellings
- A reduction in the amount of retail provision, reducing A1-A4 retail development by 1540m2 to 5154m2.
- The effect of this amendment to the Preferred Option Base Scenario is to reduce the final development value from £4.54m to £3.44 - *all other things being equal*. Developing a marina in the Canal Head at sites 1c and 1d for residential and retail uses, specifically new housing contributes around £1.1m profit towards the reinstatement of the canal.

Both these suggested locations would therefore reduce the final development value by approximately £1.1m. These figures do not allow for the value generated by the Marina, but neither do they include the capital costs of developing the Marina. The cost of land and the costs of construction of the marina are likely to be significant, especially at Parkside Road North where removal of contaminated materials might be required.

G1.3 Economic Viability

The economics of inland marinas are well understood by British Waterways. BW consider 150 berth marinas to be the economic minimum, however a marina development of around 0.76 ha as discussed above would be a small marina of up to 50 berths. A larger, and therefore more economically viable marina of 150 berths would require around 2.25 ha or around 1/3 of the total AAP area.

The value of a marina and business case is underpinned by achievable mooring fees, however the lack of connection to the wider canal network in the short to medium term will act to limit demand and hence the level of revenue that mooring fees can provide.

G1.4 Wider Strategy for the Northern Reaches

The benefits that canals and their restoration can bring to rural economies is well proven. In the case of Kendal it is hoped that the redevelopment of the Canal Head area to include commercial, residential and leisure facilities will provide a tourist destination whilst also releasing the benefits for Kendal.

However in the short term, until the Northern Reaches is connected traffic, and thus demand for a marina is likely to be limited.

In the longer term, Phases 2 and 3 of the canal restoration will link the canal in Kendal to the existing canal at Stainton and will provide benefits to the wider area including many more opportunities for canalside rural diversification, but also generate greater numbers of visiting boats and improve the potential viability of a marina.

The Lancaster Canal is already very popular with boaters and it is believed that completion of the full restoration to navigation would see its popularity increase still further. With this increase in usage will almost certainly come an increase in demand for facilities and services including both temporary and permanent moorings.

Upon completion of phases 2 and 3 there are likely to be opportunities for landowners along the canal route to sustainably diversify their current activities including amongst others the development of new marinas.

British Waterway's view is that demand for economic mooring space or a marina could be more economically met in the countryside south of Kendal. Lower land values (with land values constrained by greenbelt designations) make a marina south of Kendal less expensive in capital terms, and thus more commercially viable as well as offering local farmers and landowners to the south of Kendal the opportunity to diversify and earn additional income.

Appendix H

Glossary

H1 Glossary

This glossary gives an explanation of planning terms that appear in the Core Strategy preferred options report which may not be generally understood.

A

Affordable Housing

Housing for sale or rent, provided at a cost considered affordable in relation to incomes that are average or below average, or the price of general market housing.

Amenity

A positive element or elements that contribute to the overall character or enjoyment of an area. For example, open land, trees, historic buildings and the inter-relationship between them, or less tangible factors such as tranquillity.

Annual Monitoring Report (AMR)

A report submitted to the government by local planning authorities or regional planning bodies assessing progress with and the effectiveness of a Local Development Framework.

Appropriate Assessment (AA)

Information submitted with a Sustainability Appraisal to consider how any adverse environmental impacts of a plan or development can be reduced.

Area Action Plan (AAP)

A type of Development Plan Document focused upon a specific location or area subject to significant change or conservation.

Area of Outstanding Natural Beauty (AONB)

An area recognised as being of significant landscape value that has been statutorily designated at a national level to conserve and enhance it.

B

Balanced Housing Market

A housing market in which the majority of people have or are able to obtain a home that they can afford and which fulfils the basic criteria of being a decent place in which to live. Housing supply and demand will be roughly in equilibrium.

Bio-diversity

The whole variety of life encompassing all genetics, species and ecosystem variations, including plans and animals.

Biodiversity Action Plan (BAP)

A strategy prepared for a local area aimed at conserving and enhancing biological diversity.

Building Regulations

Legal Requirements to be observed in the construction of domestic, commercial and industrial buildings to ensure they are safe and energy efficient.

C

Clawback

In terms of retail, the ability of a new retail store to retain trade or customers that may otherwise travel further afield.

Climate Change

Long-term changes in temperature, precipitation, wind and all other aspects of the Earth's climate. Often regarded as a result of human activity and fossil fuel consumption.

Clusters

In relation to employment, a group of businesses or organisations who, owing to the goods they produce and/or services they provided have common customers, technology or use similar specialist skills and they group together in order to enhance their overall competitive advantage of individual companies.

Conservation

The planning and management of resources or assets so as to secure their continued supply while maintaining and enhancing their quality, value and diversity.

Conservation Area

Area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance.

Community Strategy

A strategy prepared by a local authority, under the Local Government Act 2000, to improve local quality of life and aspirations.

Comparison Goods

Retail items not bought on a frequent basis, for example televisions and white goods (fridges, dishwashers etc).

Convenience Goods

Everyday essential items, such as food.

Core Strategy

A Development Plan Document setting out the spatial vision and strategic objectives of the planning framework for an area, having regard to the Community Strategy.

D

Decent Home Standard

A national standard that states that a home must be warm, weatherproof and have reasonably modern facilities in order to be classed as 'decent'.

Department for Community and Local Government (DCLG)

The central government department with responsibility for housing, urban regeneration, planning and local government. This department was formally known as the Office of the Deputy Prime Minister (ODPM) prior to 5 May 2006.

Development

Development is defined under the 1990 Town and Country Planning Act as "the carrying out of building, engineering, mining or other operation in, on, over or under land, or the making of any material change in the use of any building or other land." Most forms of development require planning permission."

Development Boundary / Development Limit

Development boundaries or limits identify the area within which development proposals would be acceptable, subject to complying with other policies contained in the Development Plan. They seek to prevent development from gradually extending into the surrounding countryside.

Developer Contributions

Developer contributions are often required for major developments to ensure sufficient provision is made for infrastructure and services such as roads, schools, healthcare and other facilities. Contributions are usually secured through planning conditions or legal agreements (sometimes referred to as planning obligations or S106 agreements).

Development Control

The process of determining, or deciding, planning applications.

Development Plan Documents (DPDs)

Development Plan Documents are prepared by local planning authorities and outline the key development goals of the local development framework. Once adopted, development control decisions must be made in accordance with them unless material considerations indicate otherwise. DPDs include the core strategy, site-specific land allocations, area action plans and the proposals map.

E

Eco Standards

In terms of housing, eco standards require developments to demonstrate high standards of energy performance. Eco standards have been regulated through the Government's Eco Homes initiative and more recently through it's Code for Sustainable Homes Programme.

Edge of Centre

A location that is within easy walking distance (within 300 metres) of the primary shopping area.

Employment Zone / Employment Land

Areas of land catering for a mix of employment uses and development including offices, research and development, general industry and some storage and distribution as defined by Classes B1, B2 and B8 of the Town and County (Use Classes Order) 2006.

Environmental Capacity

The ability of the environment to accommodate a particular activity or rate of activity without unacceptable change.

Evidence base

The information and data gathered by local authorities to justify the "soundness" of the policy approach set out in Local Development Documents, including physical, economic, and social characteristics of an area.

F

Flood Plain

Generally low-lying areas adjacent to a watercourse, tidal lengths of a river or the sea, where water flows in times of flood or would flow but for the presence of flood defences.

Flood Risk Assessment

An assessment of the likelihood of flooding in a particular area so that development needs and mitigation measures can be carefully considered.

Functional Area

An area including a Principal or Key Service Centre grouped with its adjacent settlements (those that are within 1.5km). It is considered that the smaller settlements will be able to sustain a greater level of growth compared to other settlements of a similar size within the hierarchy, on account of their proximity to the larger Principal or Key Service Centre.

G

General conformity

A Local Development Document must be in "general" conformity with the strategy and proposals set out in the Regional Spatial Strategy as assessed by the Regional Planning Body. Normally, it would only be where an inconsistency or omission of a policy causes significant harm to the implementation of the RSS that it would be considered not to be in general conformity.

Government Office for North West (GONW)

Regional government office responsible for the implementing national policy in the North West and ensuring that Local Authorities policies and plans accord with National Guidance.

Green Belt

A statutorily defined area of land, largely rural in character, which is adjacent to an urban area and which is protected from development by permanent and severe restrictions on building.

Green Gaps

Green gaps comprise the open areas around and between parts of settlements, which maintain the distinction between the countryside and built up areas, prevent the merging of adjacent places and can also provide recreational opportunities.

Green Infrastructure

The network of open space, woodlands, wildlife habitat, parks and other natural areas, which sustain clean air, water, and natural resources and enrich their citizens' quality of life.

Greenfield Land or Site

Land (or a defined site), which is usually farmland that has not previously been developed.

Gypsy and Travellers

Gypsies or Travellers are defined in Circular 01/2006 as “Persons of nomadic habit of life whatever their race or origin, including such persons who on grounds only of their own or their family’s or dependant’s educational or health needs or old age have ceased to travel temporarily or permanently, but excluding member of an organised group of travelling show people or circus people travelling together as such.”

H

Heritage

A general term used to refer to historical and archaeological features, buildings and monuments, which have characterised an area for generations and are of local, regional or national interest.

Historic Parks and Gardens

A park or garden of special historic interest. Graded I (highest quality), II* or II and designated by English Heritage.

Housing Needs Survey

A survey undertaken to ascertain the level, type and distribution of housing need within a particular area.

I

Independent Examination

The process by which a planning inspector may publicly examine a Development Plan Document (DPD) or a Statement of Community Involvement (SCI), in respect, before issuing a binding report. The findings set out in the report of binding upon the local authority that produced the DPD or SCI.

Infrastructure

Basic services necessary for development to take place, for example, roads, electricity, sewerage, water, education and health facilities.

Infill Development

The development of a relatively small gap between existing buildings.

J

K

Key Diagram

The diagrammatic interpretation of the spatial strategy as set out in a local authority's Core Strategy.

Key Service Centres (KSCs)

Key service centres are intended to act as vital “service hubs” for surrounding villages and rural areas, providing a range of services including; retail, leisure, community, civic, health and education facilities and financial and professional services. KSCs also have good public transport links to surrounding towns and villages, or the potential for their development or enhancement.

Knowledge-based Industry

High technology industries (such as computers and office equipment, and pharmaceuticals) and knowledge-based services (for example, telecommunications, information technology, finance, insurance and business services), which are important to economic development.

L

Lifetime Home Standard

Criteria developed by a group convened by the Joseph Rowntree Foundation in 1991 to help house builders produce new homes flexible enough to deal with changes in life situations of occupants e.g. caring for young children, temporary injuries, declining mobility with age.

Listed Building

A building of special architectural or historic interest. Listed buildings are graded I, II* or II with grade I being the highest. Listing includes the interior as well as the exterior of the building, and any buildings or permanent structures (e.g. wells within its curtilage). English Heritage is responsible for designating buildings for listing in England.

Local Development Plan Documents (LDDs)

These include Development Plan Documents (which form part of the statutory development plan) and Supplementary Planning Documents (which do not form part of the statutory development plan). LDDs collectively deliver the spatial planning strategy for the local planning authority's area.

Local Development Framework (LDF)

The overarching term used to describe the collection of Local Development Documents (LDDs) prepared by a local planning authority.

Local Occupancy Housing

A policy tool used to steer new housing provision towards meeting locally derived needs.

Local Development Scheme (LDS)

Sets out the programme for the preparation of the documents, which will form the LDF.

Local Plan

A document which sets out detailed policies and specific proposals for the development and use of land, and guides planning decisions. Local Plans will be replaced by Local Development Documents.

Local Service Centres (LSCs)

Local Service Centres provide basic services to ensure that the immediate needs of the community are met locally without the need to travel. LSCs have a role to play in accommodating small-scale new development.

Local Strategic Partnership

An overall partnership of people that brings together organisations from the public, private, community and voluntary sector within a local authority area, with the objective of improving people's quality of life.

Local Transport Plan

A five-year integrated transport strategy, prepared by local authorities in partnership with the community, seeking funding to help provide local transport projects. The plan sets out the resources predicted for the delivery of the targets identified in the strategy.

M

Market Town

Small to medium-sized country towns that are rural service, social and economic centres. Most also hold or used to hold a regular market.

Master Plan

A type of planning brief outlining the preferred use and layout for a site to provide detailed guidance for subsequent planning applications.

Micro-generation Technologies

The small-scale production of heat and/or electricity from a low carbon source. This includes energy generated from small-scale technologies such as solar, wind, hydro, heat pumps, biomass, combined heat and power and small-scale fuel cells.

N

National Park

The statutory purpose of a national park is to conserve and enhance its natural beauty, wildlife and cultural heritage and to promote opportunities for public understanding and enjoyment of its special qualities.

Natura 2000 Sites

Sites protected as part of a European network, Natura 2000, which represents areas of the highest value for natural habitats and species of plants and animals which are rare, endangered or vulnerable in the European Community.

O

Open Space

All space of public value, which can offer opportunities for sport and recreation or can also act as a visual amenity and a haven for wildlife. Areas of open space include public landscaped areas, playing fields, parks and play areas, and also areas of water such as rivers, canals, lakes and reservoirs.

Outline Planning Permission

A general application for planning permission to establish if a development is acceptable in principle, subject to subsequent approval of detailed matters.

P

Park and Ride

A scheme enabling motorists to leave their vehicles at edge-of-town car parks and travel into town centres by public transport.

Phasing or Phased Development

The phasing of development into manageable parts. For example, an annual rate of housing release for a large development that may need to be controlled so as to avoid destabilising housing markets and causing low demand.

Plan Monitor and Manage Approach

An approach, usually used in relation to housing provision, involving three elements: planning for an overall annual rate and distribution of new development, monitoring provision against targets and indicators and managing the process.

Planning and Compulsory Purchase Act 2004

The Act updates elements of the 1990 Town & Country Planning Act. The Planning and Compulsory Purchase Act 2004 introduces: a statutory system for regional planning, a new system for local planning, reforms to the development control and compulsory purchase and compensation systems and the removal of crown immunity from planning controls.

Planning Policy Guidance Notes (PPGs)

Documents provided by the Communities and Local Government setting out government policy and advice on planning issues such as housing, transport and conservation etc. PPGs are currently being replaced by Planning Policy Statements.

Planning Policy Statements (PPSs)

Documents provided by the Communities and Local Government setting out government policy and advice on planning issues such as housing, transport and conservation etc. PPSs replace existing Planning Policy Guidance Notes.

Preferred Options

This is a formal consultation stage of the Core Strategy which identifies the Local Planning Authority's preferred approach and will show any likely development proposals as well as any proposals that have been rejected and the reasons for this.

Previously Developed Land

Previously developed land that is, or was, occupied by a permanent structure (excluding agricultural or forestry buildings), and associated fixed-surface infrastructure. The definition covers the curtilage of the development. Planning Policy Guidance Note 3 (Housing) has a detailed definition.

Primary Care Trusts (PCTs)

Primary Care Trusts (PCTs) cover all parts of England and receive budgets directly from the Department of Health. Since April 2002, PCTs have taken control of local health care while strategic Health Authorities monitor performance and standards.

Primary Shopping Area (or Primary Retail Frontage)

An area where retailing and the number of shops in a town centre is most concentrated.

Principal Service Centres (PSCs)

Principal Service Centres (PSCs) are the largest Key Service Centres, which act as vital "service hubs" for surrounding villages and rural areas, providing a range of services including; retail, leisure, community, civic, health and education facilities and financial and professional services. PSCs and other KSCs also have good public transport links to surrounding towns and villages, or the potential for their development or enhancement.

Public Realm

The parts of a village, town or city (whether publicly or privately owned), which are available for everyone to use. This includes streets, squares and parks.

Q

R

Ramsar Site

Wetlands of international importance listed under the Ramsar Convention.

Regeneration

The economic, social and environmental renewal and improvement of rural and urban areas.

Regional Spatial Strategy (RSS)

A strategy prepared by the Regional Planning Body for how a region should look in 15 to 20 years time and possibly longer. The RSS identifies the scale and distribution of new housing in the region, indicates areas for regeneration, expansion or sub-regional planning and specifies priorities for the environment, transport, infrastructure, economic development, agriculture, minerals and waste treatment and disposal. Most former Regional Planning Guidance is now considered RSS.

Registered Social Landlord (RSL)

Technical name for a body registered with the Housing Corporation. Most Housing Associations are RSLs. They own or manage some 1.4 million affordable homes, both social rented and intermediate.

Renewable Energy

Renewable energy is energy flows that occur naturally and repeatedly in the environment, for example from the wind, water flow, tides or the sun.

Rural Diversification

The expansion, enlargement or variation of the range of products or services provided from a rural business. This includes branching out from traditional farming activities by providing new income generating enterprise such as tourism.

Rural Exception Policy

A policy in a development plan document which enables sites which would not be developed for general market housing to be developed solely for affordable housing.

S

Scheduled Ancient Monument

Nationally important monuments usually archaeological remains, that enjoy greater protection against inappropriate development through the Ancient Monuments and Archaeological Areas Act 1979.

Second Home

A seasonally occupied dwelling that is not the primary residence of the owner.

Sequential Approach / Sequential Test

A planning principle that seeks to identify, allocate or develop certain types or locations of land before others. For example, brownfield housing sites before greenfield sites, or town centre retail sites before out-of-centre sites.

Settlement Hierarchy

A series of levels used to organise development and service provision. Priority is given to Principal Service Centres and other Key Service Centres which are supported by a number of designated Local Service Centres.

Site of Special Scientific Interest (SSSI)

A site identified under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) as an area of special interest by reason of any of its flora, fauna, geological or physiographical features (i.e. plants, animals, and natural features relating to the Earth's structure).

Soundness (see also Tests of Soundness)

A Development Plan Document is considered sound if it is based upon good evidence and has been prepared in accordance with all the necessary procedures including the measures set out in the authority's statement of Community Involvement.

Spatial Planning

Spatial planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they function. This will include policies which can impact on land use by influencing the demands on, or needs for, development, but which

are not capable of being delivered solely or mainly through the granting or refusal of planning permission and which may be implemented by other means.

Spatial Vision

A brief description of how the area will be changed at the end of a plan period.

Special Areas of Conservation (SACs)

These are areas that have been given special protection under the European Union's Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

Special Needs Housing

Housing to meet the needs of groups of people who may be disadvantaged, such as the elderly, the disabled, students, young single people, rough sleepers, the homeless, those needing hostel accommodation, key workers, travellers and occupiers of mobile homes and houseboats.

Special Protected Areas (SPAs)

Sites classified under the European Community Directive on Wild Birds to protect internationally important bird species.

Sustainability Appraisal (SA)

An appraisal of the economic, environmental and social effects of a plan to ensure it is in accordance with sustainable development principles.

Statement of Community Involvement (SCI)

This document, which forms part of the Local Development Framework, sets out how and when the community can get involved in the preparation of DPDs.

Strategic Environmental Assessment (SEA)

Information submitted with a Sustainability Appraisal to evaluate the likely environmental impacts of a plan or development and assess how these could be reduced.

Structure Plan

A statutory development plan prepared (or saved) by local planning authorities which sets out strategic planning policies and provides the basis for detailed policies in local plans. These plans will continue to operate for a time after the commencement of the new development plan system and will be replaced by Regional Spatial Strategies.

A Supplementary Planning Document

A Local Development Document that may cover a range of issues, thematic or site specific, and provides further detail of policies and proposals in a 'parent' Development Plan Document.

Sustainable Development

A widely used definition drawn up by the World Commission on Environment and Development in 1987: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable Drainage Systems (SUDS)

Sustainable Drainage Systems use a variety of techniques to manage surface water, protect or enhance water quality and consider the amenity value of surface water in urban areas to reduce flooding, pollution and damage to the environment.

Sustainable Transport / Sustainable Travel

Walking, cycling and public transport, which is considered to be less damaging to the environment and contributes less to traffic congestion than one-person car use.

T

Test of Soundness

Soundness is effectively defined by paragraph 4.24 of PPS 12, which sets out the nine tests of soundness and states that a development plan document will be sound if it meets them. The function of the independent examination is primarily to assess the submitted document against these nine tests. While individuals and organisations may wish to see the plan changed to accommodate their interests or concerns, the examination will not ask whether the plan should change to accommodate what is sought. Rather, it will ask whether the plan is sound in relation to each of the tests, and if not how it should be changed to render it so. The tests can be paraphrased as relating to -

- Compliance with the Local Development Scheme
- Compliance with the Statement of Community Involvement or minimum requirements of the regulations
- The sustainability appraisal of the plan and its policies
- That it is a spatial plan and compliant with higher order planning strategy, including national policy
- The regard it has to the community strategy
- The coherence of the plan and its consistency with other development plan documents including neighbours' plans where relevant
- The appropriateness of the strategies, policies and allocations in the light of alternatives and their founding on robust evidence
- The mechanisms for implementation and monitoring
- Flexibility

Town Centre

Includes a range of different sized centres, including market and country towns, traditional suburban centres, and quite often, the principal centre(s) in a local authority's area.

Traffic Management

The promotion of a more efficient and appropriate use of a street system by re-arranging the flows, controlling the intersections, and regulating the times and places for parking by means of traffic orders. Traffic management can give priority to different forms of transport, such as buses or to pedestrians.

Turnover

In relation to retail, amount of sales per unit area of retail floorspace.

Transport Assessment (TA)

An assessment of the availability of, and levels of access to, all forms of transportation.

Travelling Showpeople

A revised version of Circular 22/91 (January 2007) provides the following definition "Members of an organized groups of travelling showpeople or circus people (whether or not travelling together as such). They include such persons who on the grounds of their own or their family's or dependants' more localized pattern of trading, educational or health needs or old age have ceased to travel temporarily or permanently, but excluding gypsies and travellers".

Travel Plan (TP)

A travel plan aims to promote sustainable travel choices (for example, cycling) as an alternative to single occupancy car journeys that may impact negatively on the environment, congestion and road safety. Travel plans can be required when granting planning permission for new developments.

U

Urban Extension

Involves the planned expansion of a town and can contribute to creating more sustainable patterns of development when located in the right place, with well-planned infrastructure including access to a range of facilities, and when developed at appropriate densities.

V

Viability

In terms of retailing, a centre that is capable of commercial success.

Vitality

In terms of retailing, the capacity of a centre to grow or develop its likeliness and level of activity.

W

Windfall site

A site not specifically allocated for development in a development plan, but which unexpectedly becomes available for development during the lifetime of a plan. Most "windfalls" are referred to in a housing context. They tend to be very small sites for one or a small number of homes.

X, Y, Z