ROGER TYM & PARTNERS
Planners and Development Economists

Roger Tym & Partners
7 Soho Square
London W1D 3QB

t: 020 7025 7100
e: london@tymconsult.com
w: www.tymconsult.com

Scarborough Borough Council

Infrastructure Study

Final Report | December 2011

CONTENTS

APPENDICES

1 INTRODUCTION

1.1 This report is the Scarborough Borough infrastructure assessment. The report was written by Roger Tym & Partners with Peter Brett Associates (specialist transport input) and UCE (specialist utilities input) and sets out the level of infrastructure that could be required to meet the growth aspirations of the Borough.

1.2 We were appointed in autumn 2009. Much of the analysis in this report was undertaken during early-mid 2010, and so reflects findings at that point in time. Final publication of the report was held back in order to take advantage of emerging transport modelling and new legislation. Scarborough Borough Council will keep the report constantly under review to ensure the details are as up to date as possible and also take into account changes to the planning system. Whilst this report refers to a period up to 2026, the Borough Council are likely to extend this period to 2030. This will make little difference to the evidence as the levels of housing development are likely to remain similar, though over a slightly longer period.

1.3 This is necessarily a long and detailed report. However, we have tried to clarify the issues, rather than further obscure them. A quick understanding of the report can be reached by simply reading the "headline" sub-titles, whilst more detail is contained in the supporting text.

Our brief

1.4 Our brief is to understand the infrastructure implications of housing and jobs growth in Scarborough Borough to 2026. We cover all the requirements that PPS12 has for sound infrastructure planning – so, in the words of PPS12, we provide

"infrastructure planning [which] considers infrastructure to support development, costs, sources of funding, timescales for delivery and gaps in funding. This allows for identified infrastructure to be prioritised".

1.5 The Draft National Planning Policy Framework states a similar requirement to ensure that Local Plans "have assessed the quality and capacity of…infrastructure and its ability to meet forecast demands."[1]

1.6 We cover the following areas of Infrastructure requirements, costs, and funding, including:

- What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?
- How can new infrastructure be funded? We look at mainstream funding, anticipated S106 payments at Middle Deepdale and possible levels of future CIL and New Homes Bonus funding.
- Issues, dependencies and barriers to growth. We will look at the key issues that need sorting out in order to facilitate housing and jobs growth.

[1] DCLG 2011 *Draft National Planning Policy Framework* (para 31)

1.7 We will then go on to look at how any findings affect the future planning of the Borough. We will review the plan period in general, but focus on the first five years.

2 OUR SCOPE AND APPROACH

Introduction

2.1 This section defines the scope of our assessment and the approach we have taken.

The area and sites we are covering

2.2 This report covers that part of the Scarborough Borough Council area outside of the North York Moors National Park. We are mainly focusing on areas of concentrated development, but have also encompassed smaller, more rural sites. This is based on a pattern of development that has emerged through previous work on the Local Plan replacement.

2.3 We follow PINS in defining these areas of concentrated development as being "strategic" if the delivery of the core strategy is dependent on their delivery[2].

2.4 We have included a map showing our coverage at Appendices 1 and 2.

The types of infrastructure we are looking at

Defining our scope

2.5 In this study, we are looking at the following types of infrastructure:

Table 2.1 Infrastructure categories

Primary infrastructure	
Ambulance	Fire
Police	Primary health care
Education and childcare	Transport
Public space, parks, sport and leisure	Community centres, libraries
Secondary infrastructure	
Waste	Gas
Electricity	Waste water
Potable water	Flood defence

2.6 Note that Section 216 of the Planning Act 2008 (as amended by CIL Regulation 63) provides a wide definition of the types of infrastructure that can be funded by CIL, including roads and other transport facilities, flood defences, schools and other educational facilities, medical facilities, sporting and recreational facilities, and open spaces. CLG has confirmed that this list is not absolute and that the definition has necessarily been left open in order to avoid having to update the Regulations on a regular basis.

We are focusing on "primary infrastructure"

2.7 We are focusing on primary infrastructure in this study (although, as we discuss below, we will be covering secondary infrastructure). These categories are marked above in the table.

[2] PINS (2009) *Examining Development Plan Documents: Learning from Experience* (9)

2.8 Primary infrastructure is infrastructure required to accompany development in order to allow new households and jobs to function within a wider community. This infrastructure will be largely used by the community living and working in the development but others would not be excluded from using these facilities.

2.9 It is assumed that some developer contribution in the form of S106 or CIL will be required to support the provision of primary infrastructure. In many instances, other mainstream central or local funding will also be used to support the delivery of primary infrastructure.

We deal with secondary infrastructure differently

2.10 Secondary infrastructure is infrastructure intended to create accessible, serviced and developable sites. Developers build these costs into their assessment of sites.

2.11 Secondary infrastructure will typically include internal access roads within their sites, and connections to the mains for drainage, sewage, gas, electricity and telecoms. Developers also generally pay for small scale open and play spaces together with on site and adjacent landscaping, and so this falls within the definition. (Note that more strategic open and play spaces are dealt with explicitly under primary infrastructure).

2.12 A separate itemisation of all secondary infrastructure costs and requirements as part of this assessment would be a) redundant and b) unacceptably complicated. However, these costs have not been ignored. We have built in generic costs of secondary infrastructure into our assessment of developer contributions.

2.13 There may be instances when utilities need upgrading to cope with growth. In these instances, there will be cost demands that go beyond the simple requirements of connection to the mains. It may be, for example, that utility provision is at capacity, and that further growth is impossible until further investment takes place. Often, utility can recoup the capital expenditure to meet growth from charges on new customers. However, in some (but not all) instances, part or all of these costs may fall on the developer. Our method has explicitly picked up these issues with utility companies, where information is available.

2.14 We have taken a similar approach to flood issues.

We deal with affordable housing costs through their effects on potential developer contributions (such as CiL)

2.15 Affordable housing requirements must be understood as part of an infrastructure study, because the levels of affordable housing demanded have a profound onward impact on the viability of development, and on amounts of developer contribution available from each housing site to fund infrastructure.

2.16 Our high level estimates of potential CIL contributions (which are raised from development) take account of affordable housing requirements.

Understanding the categories of infrastructure which are outside our scope

National infrastructure is beyond our scope

2.17 It is the Government's intention that developer contributions should be sought for infrastructure which is (in the words of the CIL Regulations) 'directly related to the proposed development' and 'fairly and reasonably related in scale and kind to the proposed development'. These are the same tests that are in Circular 05/05 on planning obligations, except that they have now been placed in law.

2.18 The precise limits of what this might mean in practice were debated within Government in the course of preparing the CIL Regulations. We understand that the general approach adopted was that infrastructure that is commonly seen as a core competency of national Government and their agencies was to be excluded from developer contributions. This means that areas of infrastructure provision such as defence infrastructure, prisons and law courts are excluded from this assessment. The exceptions were agreed to be the infrastructure provided by the Environment Agency and the Highways Agency.

2.19 We have therefore adopted this approach in our assessment.

Private "infrastructure" is beyond our scope

2.20 The brief focuses on the costs of providing the public infrastructure required to meet the growth proposals at in the borough.

2.21 We note that the private market provides a number of facilities than can be interpreted as being "infrastructure" - including things such as petrol stations, shopping facilities, and (state-regulated but privately provided) pharmacists and opticians. The provision of these private-sector services can be an important component in perceptions of the quality of life in an area. However, because these will be privately provided we will not be quantifying infrastructure requirements or calculating the costs or funding of providing this private "infrastructure". Where this activity creates jobs, however, we take account of the infrastructure needs it generates.

Requirements: our approach to estimating the requirements of infrastructure for growth

2.22 This part of our work looks at the infrastructure *required* to support planned growth.

This work focuses on the infrastructure requirements of future growth

2.23 This infrastructure assessment will focus on the infrastructure requirements of housing and jobs growth from 2011-26. Because it focuses on *growth,* this study does not deal with general infrastructure demand and public spending requirements as a whole from existing housing and jobs development that is already in place.

2.24 The great majority of potential growth planned for the borough does not have planning permission (either outline or full), and consequently has no S106 agreement. We focus our work on this category.

2.25 However, there is also the category of sites which have planning permission (outline and full), and some which have both a planning permission and a signed S106 agreement. We assume that service providers (many of whom are statutory consultees to the planning process) are generally aware of this growth. Because these sites are usually located within or adjacent to the existing urban areas, and because they are generally relatively modest in output, we are assuming that infrastructure requirements of this category of growth will be taken account of through a) existing surplus infrastructure capacity and b) signed or forthcoming Section 106 agreements. In a sense, we view this growth as "water under the bridge", with local development impacts already potentially mitigated.[3] We have therefore not investigated infrastructure requirements for this category.

2.26 We take a slightly different approach to calculating transport requirements. Transport is something of a special category. Individual, incremental S106 agreements on unbuilt sites with planning permission can often mitigate very local transport impacts of growth but can fail to capture the cumulative impacts of growth on strategic transport infrastructure. (This is less of a problem with infrastructure such as schools or primary care. Because growth impacts are generally confined within catchment areas, even incremental S106 agreements can often successfully mitigate impacts). To deal with transport requirements properly, we have therefore looked at the transport requirements of *all* growth expected from 2011-26 (from sites both with and without planning permission and any section 106 agreements).

2.27 It is worth specifically explaining our approach to Middle Deepdale. This is a major strategic site which has been subject to negotiation during our study period. During the study period, the scheme does not yet have either outline or full planning permission, and consequently has no signed Section 106 agreement (although an application has been submitted) In line with the principles above, the infrastructure requirements of this site have therefore been included in this study.

2.28 Note that where planning permission has already been granted and a S106 signed, then this development cannot be charged development contributions towards infrastructure again, either through a subsequent S106 or any future CIL. On the funding side, it is worth noting, though, that Middle Deepdale is assumed to contribute to infrastructure through the S106 agreement rather than any future CIL. This is because a S106 agreement is relatively close to being agreed.

Service providers have been consulted

2.29 The requisite information on infrastructure needs, costs, funding and phasing was provided by the stakeholders and collated. Clarification of any issues was provided through follow-up questioning.

2.30 In some instances, we have not been able to include all of service providers' requests for infrastructure. This is for two reasons.

[3] We recognise that in practice some of this growth's infrastructure requirements may not have been fully provided for through those existing planning agreements. This may be particularly the case for smaller sites, which across the country have historically often escaped making significant developer contributions. This is to be expected, and these uncertainties are within a sensible margin of error for the study as a whole.

2.31 Firstly, in some instances the planning system does not oblige developers to make certain types of payments, so these have not been included.

2.32 Secondly, we tried to ensure that infrastructure requirements and costs were treated in the most appropriate way to maximise the potential deliverability.

Demographic changes have been taken into account through our work with service providers

2.33 There are two demographic issues which need to be borne in mind with this assessment. The first is the changing demographic profile of the population; the second is the relationship between the provision of new housing stock and the population growth. There are two points to make.

- The changing demographic profile: typically, the UK population is ageing. Scarborough's population is already significantly older than the UK average, and proportion of over 60s in the population is expected to grow further in coming years.[4] These changes in the demographic profile might mean that, for example, less education infrastructure was required than might otherwise be the case.
- The relationship between new housing stock, and population growth. It is often the case that some of the residents of proposed new houses will already live in the same local authority area. In areas where the average household size is reducing – as in Scarborough - an increase in housing stock may not result in a commensurate increase in the local population, even allowing for new occupants of the vacated houses.[5] For example, new housing might cater for divorcees, or suppressed households, who previously lived in existing households within the area. This reduces the extra pressure on the local community infrastructure as a result of the proposed development. It is therefore possible that jobs and housing growth may simply represent an alteration in the location of demand, or lower population densities.

2.34 Time and budget does not allow us to deal with these issues formally. We have relied on service providers being broadly aware of these issues (in some cases, such as education, an understanding of these matters is core to their work).

2.35 In the absence of any particular information to the contrary, we make the assumption that the population in the new housing is similar in profile to that in the existing housing.

[4] ONS 2008 based population projections: 30.2% of the population are aged over 60, compared with an average of 22% nationally. Only 20.2% of the population are aged between 20 and 39, compared to 27.2% nationally. Population change is predicted to have a major impact on future housing markets and the requirement for specialist support and accommodation. The population is expected to increase by around 12,500 between 2008 and 2030 and the proportion of the population aged 60 or over is expected to increase to 37.8% by 2030 (31.2% now).

[5] ONS 2008 based Household projections suggest an increase of around 10,000 households over the period 2008 to 2030, with increases in the proportion of multi-person and one-person households particularly noticeable.

We have population projections for the area, and have used these for household size information

2.36 Demographers looked at the increase in the number of projected households for the period. Changes in household sizes have also been modelled.

2.37 The projections used at the time of analysis showed that the overall level of the population was projected to rise by some 13,800 between 2006 and 2026 in the borough.

Table 2.2 Scarborough population growth[6]

	2011	2016	2021	2026	2031 (not in plan period)
Scarborough population	111,300	115,600	120,300	125,100	129,600

Source: ONS

2.38 Since the analysis was undertaken for this report, projections have been updated. 2008 projections that were released in 2010 show that the Scarborough borough population is expected to rise from 110,600 in 2011 to 122,800 in 2031. We did not revise our findings to account for these altered projections, because these changes are well within the margin of error for a strategic study of this type.

2.39 Where we need household size figures for our assessment (and, as explained above, we have usually relied on service providers being aware of future population change, rather than dealing with this issue formally), we have used the original (rather than the revised) demographic figures from the ONS to understand household sizes across 2011 to 2026, and applied this to the anticipated housing growth. On this basis, the Scarborough area has 2.11 people per household on average over the remaining plan period. Again, small changes in household size are well within the margin of error of a strategic study of this type.

Table 2.3 Scarborough average household sizes[7]

	2006	2011	2016	2021	2026	2031	Remaining plan period average
Scarborough household size	2.21	2.18	2.14	2.07	2.05	2.03	2.11

Source: ONS / RTP

We have avoided the "wish list" approach to infrastructure requirements

2.40 It is not desirable to load an infrastructure assessment with a gold-plated "wish list" of perceived needs. PPS12 is clear that Core Strategies need to:

[6] ONS 2008 Based Sub Regional Projections of Population.

[7] Population per household based on 2008 ONS sub regional projections of populations and ONS 2008 Based Sub Regional Projections of Population. The above represents total population per household, and thus includes non-household residents such as those in institutions such as prisons, student residences and care homes. It does not allow for vacant properties. It does not specifically focus on the expect number of occupants of a new dwelling, which may also vary from the average.

- Have evidence of deliverability, with evidence strong enough to stand up to independent scrutiny;[8] and
- Have evidence of "what physical, social and green infrastructure would enable the amount of development proposed for the area, taking account of its type and distribution".[9]

2.41 The key concepts here are those of a) enabling development, and b) deliverability. Clearly, infrastructure provision should not be so elaborate and costly that it forms a barrier to development. In this assessment, we have tried to provide a pragmatic approach that balances deliverability with providing sufficient infrastructure to ensure the growth is properly catered for. It is not our proper role to barter with service providers in order strip infrastructure requirements or costs out of their plans. But we have tried to calibrate our method to help us gauge a realistic level of infrastructure provision, in the following ways.

- Wherever possible, our approach has been to work from first principles. We have provided service providers with a map showing the location and quantum of jobs and housing growth. We have invited them to explain what requirements they have, given this planned growth, and invited them to explain why this infrastructure is required. This process has built a realism and transparency into the approach.
- Our rough rule of thumb is that the infrastructure requirements for growth in this assessment should be broadly in line with the levels of infrastructure enjoyed by the rest of society.
- We have attempted, wherever possible, to take account of service providers' existing spare capacity. We rely on service providers' expertise here. This has the effect of reducing infrastructure requirements, and so their costs and funding requirements.

Service delivery is continually being reconfigured. Strategies change. This affects levels of infrastructure required to support new growth

2.42 In this assessment, we are aiming at a moving target. Public services, and hence the infrastructure they demand for delivery, are in a constant state of flux. For example, reviews of transport policy could have big implications for infrastructure requirements. Technology is likely to affect infrastructure requirements over the next few years in ways which may be difficult to predict. In other service areas, joint use community/education/ PCT buildings infrastructure are currently being examined, all of which alter infrastructure demand. Funding levels (and, consequently, legitimate infrastructure requirements) vary with political exigencies, and are in great flux at the moment. Most service providers do not plan beyond three years, and so cannot by definition be expected to know their precise requirements in (say) ten years time.

2.43 This means that infrastructure requirements as a result of growth are difficult to predict and are necessarily subject to a considerable margin of error. In addition, there are uncertainties

[8] DCLG (2008) Planning Policy Statement 12 (17)
[9] Ibid (8)

over the mainstream funding that is likely to be available. The public finances should recover at some point after 2016, but we are currently unable to predict the extent to which this might take place, or when. We therefore cannot rely on public funding being significant in this study.

The precise nature and timing of growth is not fixed, meaning that being precise about the required infrastructure is not appropriate

2.44 It is important to point out that we are dealing with infrastructure requirements at a high level. In the great majority of cases, we are working far in advance of detailed masterplanning work at the individual sites. In each instance, Environmental Assessments and Transport Assessments will be carried out that would map out likely infrastructure needs and costings in more detail and precision. We are therefore certain that more detail will emerge as the planning process proceeds, and that this detail will supersede the assumptions made here.

Costs: our approach to estimating the costs of infrastructure for growth

2.45 Here we explain our overall approach to costs.

We have used service providers' cost estimates where possible, and "ready reckoner" figures where necessary

2.46 Where possible, we have used service providers' own estimates of the cost of their infrastructure requirements.

2.47 Where these estimates did not exist, we have used various sources including case studies, published guides and interpretations of data from cost guides such as *Spon's Architects' and Builders' Price Book* and the Building Cost Information Service (BCIS). We have also used case studies and benchmarks from elsewhere when appropriate.

We are quoting capital costs and revenue costs separately in this study

2.48 Recent changes to CIL Regulations made through the Localism Bill have made "ongoing" costs potentially chargeable through CIL.

2.49 In line with a) our desire to ensure that development is viable as possible, and b) our concern to avoid double funding (which we discuss later in this section), we have concentrated on capital costs in this report. We also make note of where revenue costs are likely to be substantial.

2.50 Significant capital requirements bring with them considerable revenue burdens on public bodies. We therefore flag up particular infrastructure items where service providers have expressed concerns about the revenue implications of the new provision.

2.51 Note that the distinction between capital and revenue is difficult to make in some instances. It is the case that some agencies meet capital costs through revenue expenditure, for instance through leasing or borrowing.

We quote costs at 2010 prices

2.52 The major costs quoted in this study are at 2010 real prices. Some of the less significant costs we have used from previous consultants' reports do not make a statement of which

date costs have been calculated at; we assume that they are also current costs. Uncertainty in the scale of costs is likely to be far greater than the small differences in the precise base year used in cost calculation.

2.53 No inflation is included in our cost calculations. This is because we do not know what the inflation rate will be in future, or exactly when items will be built. However, it should be noted that the CIL Regulations state that charging authorities will be required to apply an annually updated index of inflation to keep the levy responsive to market conditions. This index will be the All-In Tender Price Index of Construction Costs of the RICS. It will be important to use this to keep the CIL up-to-date over time.

Funding: our approach to estimating the funding for infrastructure for growth

2.54 Our aim in the sections on funding in this report is to show the funding available for the infrastructure. It is important to note that, as we have pointed out above, these estimates are necessarily going to be subject to a margin of error.

2.55 Below we explain our approach.

Step 1: estimating levels of mainstream public funding available

2.56 It is the Government's intention to use CIL and S106 to fund infrastructure *after* sources of mainstream Government support have been identified.

2.57 We therefore sought mainstream funding for infrastructure in the first instance. However, mainstream capital funding is now very scarce, and will remain so until 2016 at the earliest. Note that much of the work with service providers was undertaken from early to mid 2010. Cuts which have subsequently taken place were not known of at that time. However, many service providers were already aware of the negative outlook for public funding by early 2010, and their work with us reflects that fact.

Step 2: estimating the amount of infrastructure funding available for strategic infrastructure through S106/S278

2.58 Work showed that a number of pieces of strategic infrastructure (defined as infrastructure which has a wider, cross-site impact) were expected to be provided through the normal process of obtaining planning permission. This was particularly the case with the Middle Deepdale project, which is very close to getting a signed S106 agreement.

2.59 Technically, this infrastructure would be secured through site-specific S106/S278 agreements. We made a note of this funding when it is likely to be available through the Middle Deepdale project.

2.60 In other circumstances, we assume that S106 will be very limited in future to site specific impacts and supporting the provision of affordable housing. This is the approach anticipated in the CIL Regulations, which also cover the future scope of S106 charges.

Step 3: estimating the funding gap for growth infrastructure

2.61 We then turned to understand the funding that could, in theory, be properly sought through the developer contributions.

We assume that a CIL charge will be set up, but have not detailed this

2.62 It is apparent that a CIL will be increasingly necessary: after 2014, there is little realistic prospect of getting strategic infrastructure funded through S106, or even a S106 "pool". Scarborough Borough Council is undertaking separate work on a possible level of CIL charge.

2.63 The level of CIL charge is not the focus of this report. The objective here is to contribute to the production of a sound evidence base for the Core Strategy examination, so we have not gone into further detail on CIL in this report, although we are obliged to make a rough estimate of the possible level of CIL funding which might be available to the Council in some point in future.

2.64 Irrespective of the status of a Scarborough Borough CIL charge, Section 106 agreements will still be available for use, both before and after 2014.

We have not allocated funding to any particular area of work or neighbourhood

2.65 One of the central principles of this report is that we are not making definitive statements about how developer contributions available through CIL should be spent.

- We do not make suggestions about whether CIL receipts should be spent on infrastructure, although we have assumed that it will be. The Localism Act (which gained Royal Assent in November 2011) allows some of the money raised to be spent on things other than infrastructure. This is a decision that should be made by the Borough Council.
- We do not make suggestions about how CIL receipts is shared out between competing infrastructure requirements (be they education, transport, open space). Again, this is a decision that should be made by the Borough Council.
- We do not make suggestions about where CIL receipts should be spent. The Act gives the Government the power to require that some of the money raised from the levy go directly to the neighbourhoods where development takes place.

Funding for some service providers is related to population – so as population grows, funding grows

2.66 Some service providers have a funding formula which calculates funding by reference to population sizes. This means that as population grows as a result of new housing, their Government funding rises. However, this is not the whole picture: there are a number of components of these funding formulas (including factors such as population deprivation, rurality, and so on).

2.67 Service providers in this position include Education (which receives a local authority grant, but one ring fenced by central Government), Health / PCTs, Police, Fire Service, and the Ambulance Service.

2.68 Local authorities are also funded on a formula that includes population numbers and their characteristics. The services that local authorities provide (such as libraries and waste) can therefore be said to be at least partially funded on a per capita basis.

We need to avoid "double funding" service providers – funding them once through the development process, and again from capitation-related mainstream funding

2.69 Double funding occurs when service provider agencies that receive capitation based funding seek reimbursement from developers of the capital cost of providing facilities.

2.70 We believe that this double funding has become increasingly common practice over the past few years, as more service public agencies have used Section 106 payments as a means of bolstering their budgets. Whilst house prices were rising, developers for the most part acquiesced to this in order to reduce uncertainty, expedite planning permissions and in the context of a situation in which the overall scale of demands made though Section 106 Agreements. Markets are no longer strong, and developers now tend to be unwilling to see this double funding take place.

2.71 Double funding is undesirable. In effect, one part of the economy is paying hidden subsidies to another part. This would artificially depress activity in one part of the economy (in this case the example might be house building and employment space development) and inflate it in another part beyond the level anticipated by either policy or strategy. Firstly, this is an example of a cause of economic inefficiency. Secondly, whilst the effect of this process may be no bad thing, if this is the choice that society wishes to make, then it should be made explicitly and balanced against possible reductions in overall delivery of housing and employment.

We have reviewed more innovative funding sources

2.72 A number of innovative funding sources have also been suggested for funding infrastructure. We have reviewed the available range of options, and the likely impact they will have.

Our approach to prioritisation

2.73 There must be a mechanism that will allow the prioritisation of investment in infrastructure.

2.74 It is our objective here to prioritise which infrastructure projects are most important in allowing growth in the borough to take place in a sustainable and well planned way. Please note that this prioritisation process does not intend to sequence infrastructure investments in time order.

2.75 Ultimately, it will be necessary to prioritise both within theme areas (say, prioritising the most important transport projects) and also between theme areas (say, deciding to invest in open space, rather than transport). There is no definitively right answer here. External consultants have little business in prescribing priorities to these differing courses of action. Properly, these decisions rest with elected representatives and their officers, in order to allow different areas and interests to express their different priorities.

2.76 However, it is our role to assist the process of making these decisions. We therefore have categorised different infrastructure spending into two different level of priority, in the expectation that subsequent work, outside our brief, will review the choices made.

The prioritisation categories

2.77 We have created the following categories:

- Essential requirements: this category would apply to infrastructure which would be required by legal statute or regulation, and would have to be implemented if the development was to go ahead[10].
- Other requirements: There are a range of other infrastructure investments that could be considered. Different areas are likely to have different needs that will be reflected here. Some might be very important; others might be long term ideas or more speculative concepts. As we pointed out above, much depends on the choices of the Borough Council, and the amount of money that there is available to purchase infrastructure. (Tight budgets would mean that only essential requirements were met; more funding might mean that the other projects were funded).

There are important caveats to be attached to this work

2.78 Our objective is to help provide an evidence base for a sound replacement to the Borough Local Plan, and provide a focus for long term strategic financial decisions. There is a recognition in PPS12 that this will inevitably need to be refined and realigned as the process and time unfolds. As particular sites come forward, it is very likely that there could be localised issues and impacts, which are not within the remit of this assessment to cover. These will nevertheless need to be addressed to enable development to proceed. However, the process is valuable as it offers a framework highlighting the decisions and choices which will need to be made.

2.79 There are a number of important points which must be borne in mind when using this document.

- Infrastructure providers reserve the right to update the information provided. As might be expected, there are some gaps in knowledge and understanding of what is needed and how it might be paid for. This is a point appreciated by PPS12[11]. The estimates will need to be refined over time. This assessment can, therefore, only ever be a snapshot of current infrastructure needs, commitments, options and ideas.
- The estimates of infrastructure requirements, costs and funding provided here involve spatial and temporal generalisation. Quite simply, it is not realistic to match resources to needs to places with the degree of precision necessary to reach sound decisions on what infrastructure is required on any one given site or with any one service provider.
- This infrastructure assessment is not itself a policy document. Information included in the assessment does not override or amend the various agreed/adopted strategies, policies and commitments which local authorities and other infrastructure providers currently have in place. In many respects the assessment reflects

[10] Other infrastructure spending – such as water, gas and electricity connections - are clearly essential to housing and jobs development, but because these connections can be expected to happen anyway as part of a development they fall outside our prioritisation categories.

[11] PPS12 states that that "the Government recognises that the budgeting processes of different agencies may mean that less information may be available when the core strategy is being prepared than would be ideal." DCLG PPS12 (9)

existing strategies, policies and commitments, but it also includes information and evidence which will help shape future policy making, the LDF evidence base and investment decisions.

- As we note, further work after this study has closed will be necessary to prioritise infrastructure requirements.
- Although this work can be used as a high level guide, developers and Local Planning Authorities will not be able to solely rely on this work to negotiate individual Section 106 agreements. Our analysis is not at the level of accuracy that allows this function to be performed.
- Our analysis says nothing about whether a five year supply of housing is available. This would need to be determined separately.

3 WHAT IS THE PLANNED GROWTH WE ARE PROVIDING INFRASTRUCTURE FOR?

Introduction

3.1 In this section we explain what jobs and housing growth we are providing infrastructure for. This is important, as this assessment must start from an agreed set of assumptions about housing and jobs growth.

3.2 The first part of this discussion relates to the housing growth. The second part relates to the employment growth.

Where is housing growth located? How is it phased?

The starting point for this study was the RSS

3.3 The growth agenda in respect of 'stepping up' housing delivery was established in the early draft of the Regional Spatial Strategy, however, the final figures adopted were subsequently increased to a greater level with the Borough given the ambitious target to grow by a minimum of 11,800 dwellings between 2004 and 2026 (as opposed to the original figure of 7,960 dwellings). This represents about a 25% increase in dwelling stock for the Borough.

3.4 The recent changes nationally and the proposed revocation of the Regional Spatial Strategy have resulted in the Borough Council having to re-assess the levels of growth for the Borough. The Interim Housing Position Paper published in 2010 retained growth levels at a comparable level and this is currently being updated into a formal position to coincide with the adoption of the Localism Bill and the upcoming National Planning Policy Framework.

The Core Strategy provides more detail on housing growth locations

3.5 Scarborough is in the process of replacing its current Local Plan. This will set out the scale and broad location of growth across the Borough.

We have mapped this growth

3.6 This data has been mapped, and is presented in Appendix 1 and 2. The two maps are essentially duplicates of each other – one map is simply a "close up" on the Scarborough area.

Phasing of housing growth is provided

3.7 The housing trajectory used to develop the infrastructure assessment has a bearing on the requirement and thus the planning and funding for infrastructure.

3.8 At the start of the study we were supplied with a housing trajectory by Scarborough Borough Council. It can be found at Appendix 3. Scarborough Borough Council updated the trajectory during the course of the study; however, we present the original numbers here in order to stay consistent with the numbers originally provided to infrastructure providers. During the study, the per annum trajectory was altered to a modest extent and was reprofiled to a) start in 2011/12 (rather than the original assumption of 2010), and b) to

be built out over a longer period to 2030. Units that are planned for but remain without planning permission fell by around 13% in the revision. This is to be expected as permissions work through the system.

Strategic employment growth expected

Job forecasts used by the RSS predicted jobs growth

3.9 This housing growth was intended to align with forecasts for economic forecasts produced by the Regional Econometric Model (REM), with the Regional Spatial Strategy suggesting that 3200 new jobs would be created during the plan period. The equivalent up to date REM forecast demonstrates the impact of the current economic situation, whereby the number of jobs in the Borough has decreased from 42,720 in 2007 to 39,330 in 2011. By 2026 it is anticipated that there will be 40,000 jobs, representing a slight increase over 2011 levels.

3.10 However, it should be noted that the latest REM forecasts represent a policy-off scenario, whereby the Regional Spatial Strategy housing targets have now been removed as a variable within the model. Given the Local Plan replacement is still seeking to deliver a level of housing similar to the previously described level, the REM forecasts should be considered as a baseline position, i.e. where the Borough's economy will be without any policy interventions (housing delivery, etc). A forecast that aligns more closely with the growth agenda is considered to be more realistic.

We have mapped jobs growth that can be accommodated on strategic employment and retail sites in the Scarborough area

3.11 Rather than using the outputs of economic models for this study, we have taken the potential employment space that could be allocated for jobs growth in the Local Plan replacement. Scarborough Borough Council has then provided us with a view on the number of jobs that could be accommodated on Scarborough's strategic employment and retail sites, assuming that the available land was taken up over the plan period. We understand that average density figures have been used in this calculation process.

3.12 Clearly, these predictions depend on a number of factors, not least the performance of the economy.

3.13 We have then mapped jobs growth. This can be seen on the maps at Appendix 1 and 2, alongside housing growth.

4 HOW MUCH CAN DEVELOPMENT CONTRIBUTE TOWARDS INFRASTRUCTURE NEEDS?

Introduction

4.1 Securing reasonable contributions possible from development will be an important way of funding, and therefore delivering, the infrastructure required to support growth in the Borough.

4.2 Developer contributions make an important contribution to the funding of infrastructure. There are two mechanisms though which these contributions are collected. The first is Community Infrastructure Levy; the second is Section106 contributions.

Assumptions about how much developer contributions can be raised from Community Infrastructure Levy (CIL)

4.3 The Council has commissioned work to look at possible levels of Community Infrastructure Levy (CIL) charge in the borough.

4.4 Important decisions remain to be made by the Council that would inform the final Charging Schedule, including

- Any differential charging in different areas of the Borough.
- How the Council wishes to strike the balance between - on the one hand - raising money for infrastructure, and on the other hand, maintaining the financial viability of developments in the area.

4.5 Because these decisions have yet to be made, we do not know at this stage how much money could be raised by CIL.

4.6 However, we are obliged by PPS12 to make some sensible projections of how much might be raised from developer contributions.

4.7 The assumptions we make here are entirely without prejudice to the final level of CIL Charge decided upon by the Council. The assumptions are set out in the table below.

4.8 We anticipate that the great majority of CIL charge will be levied from residential development. Some other charges may be made of other types of development, but they will be relatively insignificant when set against the receipts from residential. We therefore have not speculated on non-residential CIL receipts at this point.

Table 4.1 Residential CIL charge (high level estimate; without prejudice to the final level set by the Borough Council)

Category	CIL
Possible estimate charge per sqm	£55
Average home size m2 (rounded)	90
Number of homes without planning permission	6885
Assumed % of affordable housing	40%
Number of homes chargeable	4131
Total possible contribution	£20,448,450
Notes	Calculated on the basis of the number of homes without planning permission

Source: RTP

Assumptions about how much developer contribution can be raised from Section 106 agreements

4.9 Section 106 will exist after the institution of CIL. Development may pay both S106 and CIL, although individual circumstances will dictate the extent to which S106 is levied. Under recent CIL Regulations, which also cover Section 106, Section 106 is now expected to be very tightly targeted at mitigating the impacts of individual developments. It will also be called upon to pay for affordable housing.

4.10 Because of the newly and more tightly defined role of S106, S106 funding will no longer be able to contribute a fund for strategic infrastructure investment. In effect, then, S106 will be unavailable for wider infrastructure provision (indeed, if after CIL policies are in place, it will be unlawful to charge for a piece of infrastructure through both through CIL and S106).

4.11 We have therefore not estimated S106 contributions separately, given that they will be unavailable for strategic infrastructure delivery.

5 OTHER FUNDING SOURCES

Introduction

5.1 Having looked at developer funding in the sections above, in this section we examine other ways in which funding might be provided for the necessary infrastructure in the borough.

5.2 Given the subject matter, it is inevitable that some of this work relies on our judgement of the relevance and reliability of these sources of finance. In other areas, we are able to rely on detailed technical work that has already been undertaken.

Our approach

5.3 In some instances, the funding sources covered here are not considered to be useful in raising funding for infrastructure in Scarborough Borough. Where this is the case, we say so.

5.4 In other instances, there may be a role for certain types of funding. Many depend on political choices and some require the introduction of primary legislation. Others would need detailed work to reliably quantify the potential level of contributions, although we have made some assumptions in this study to broadly quantify the potential scale of contribution made.

5.5 We caution that experience suggests the best approach is not to simply aggregate all of the possible funding sources and then match them to aggregate needs, or to simply hunt around for possible sources of funding on an opportunistic basis, but rather to identify financial problems as precisely as possible before seeking solutions from the more limited range of possibilities that are specifically suited to addressing them.

Tax Increment Financing

We cannot see a clear role for TIF in financing Scarborough's infrastructure

5.6 The Tax Increment Financing (TIF) model is a method of financing using a future uplift in business rates (a "tax increment") resulting from an infrastructure investment. It does not involve any additional taxation.

5.7 The scheme may be useful where the sources of funding available for a scheme to deliver economic growth and renewal cannot cover the cost of infrastructure required by the scheme.

5.8 In the scheme envisaged by the Government, the additional business rates revenue that is raised as a result of a development is used to pay for the necessary infrastructure, without which the development would not otherwise occur. The increased future tax income stream which would ordinarily go to the Exchequer is "securitized" (ie, converted to a capital lump sum) by a bank. Then, the future tax income is used to repay the loan over a given period. At the end of the repayment period, tax revenues revert to the Exchequer.

5.9 Although in theory TIF could be used to fund other elements of infrastructure provision, the idea has been advanced primarily as a way of funding transport infrastructure.

5.10 We conclude that there is there could be a role for TIF in financing some transport infrastructure, but that possible role, and the scale of that role, is still not clear.

5.11 Significant set-up costs mean that TIF would be only worth doing with a relatively large scheme. We note that much depends on legislation (which will be necessary), and on the willingness of local authorities to lend against the (uncertain) future income stream created by business rates. The Council would be at risk if new business rates did not materialise.

5.12 In light of this, we do not consider it is sensible to rely on TIF to generate funding towards infrastructure needs, though it might be worth a brief review when provisions are clearer.

User charges and securitised user charges

Securitising future income streams could be explored – but would be costly, and is unlikely to raise a great deal of funding

5.13 Securitisation is a process of raising asset backed finance through a loan or an issue of debt securities that are supported by cashflow from underlying assets (rather than the borrower's business generally). Securitisation gives the lender a prior right to income from these defined assets.

5.14 The downside is that securitisation restricts the ability to change or otherwise amend the secured assets and thus limits operational flexibility.

- A Scarborough Business Improvement District could be set up, and capital for investment in (for instance) the public realm or smaller scale transport improvements could be made with a loan repaid by the additional rates income from a BID scheme. However, the amount that could be raised is not likely to prove significant. Business Improvement Districts are funded through charging local businesses an additional rate, typically an extra 1% - 2% for an agreed scheme of investment.
- Income from parking charges could possibly be securitised and used to pay for small scale transport improvements. However, any capital sum raised might be modest.

5.15 In light of this, the levels of income that could be secured are not considered to be sufficient to justify setting up such a vehicle. We have not included this as an funding source for infrastructure in this study.

Private Finance Initiative

PFI credits are scarce

5.16 Where appropriate, we have dealt with this method of financing in the subject-specific chapters. We conclude that there may be some PFI opportunities but only for big infrastructure packages. PFI credits are currently very scarce. More credits may become available after 2016.

Local Asset Backed Vehicle

A Local Asset Backed Vehicle will not be appropriate

5.17 Local Asset Backed Vehicles marry public and private landholdings to best advantage, effectively maximising the value of public land in the context of a wider development scheme and increasing project finance opportunities.

5.18 Such a vehicle has been explored by the Council and if the Borough Council considers there is merit after reviewing its land holdings, then it may be possible to take a LABV forward at some point in future. For the purposes of this study, we do not assume that this is the case.

Government grants

The advantage of upfront grant payments

5.19 The advantage of an upfront grant payment is that it can be used immediately to meet the cost of providing the infrastructure and reduces the overall cost of the scheme.

5.20 This is in contrast to a system of periodic payments. With period payments, a finance package of loans and equity is needed to pay for the construction of the infrastructure and then the loan is repaid using the periodic payments. This makes the total cost of the project much more expensive as the cost of the finance is added to the cost of construction. There are also the additional issues that the cost of finance has to cover the cost of the risk that the periodic payments are not paid on schedule, the cost of arranging the finance and supervising the repayments.

5.21 A second key advantage of an upfront payment from the public sector is that it provides a high degree of certainty that the scheme can be completed. The process of applying for public funding can be vigorous and time-consuming but once the monies have been approved there is a high degree of certainty that the project can be completed.

5.22 We do not anticipate a significant contribution to be made from grants and loans. Our reasoning is as follows.

Public funding for capital spend will be cut back by 60% to 2015/16. Discretionary funding will be reduced over the medium term

5.23 Following the budget, the Financial Times reported12 that capital expenditure is set to drop by almost 60 per cent in the period between last year and 2015-16, despite the chancellor's statement in the Budget that he was not cutting it further. As a result, public sector net investment is due to fall from £49bn last year – a figure somewhat inflated by the drive to bring forward capital projects to combat the recession – to a fraction under £21bn by 2015-16.

5.24 The government is to retain Infrastructure UK, the new Treasury body aimed at finding ways of getting extra private investment to fund the £40bn to £50bn a year economic

12 Nicholas Timmins, *Capital spending set to fall 60% by 2016* Financial Times June 23

infrastructure that the Treasury says is necessary for the foreseeable future. The reduction will be accompanied by a review of all capital spending plans, with George Osborne stating that the "absolute priority will be projects with a significant economic return to the country." The Treasury is looking for big infrastructure projects such as High Speed rail rather than incremental infrastructure works at a local level.

5.25 It is clear that public funding of any kind, whether grants or public borrowing, will be very constrained at least until the currently projected cuts conclude in 2016. Even if there are substantial increases after that date, the increases will start from a low base, and so real terms rises are likely to be modest. But it should be born in mind that the Scarborough borough development schedule is spread over two decades and there remains the possibility that public sector upfront grants may become available again during this time.

Ring fenced budgets mean greater flexibility, but this is unlikely to be offset by the overall fall in funding

5.26 A reduction in the number of 'ring fenced' budgets means that the Local Authorities will have more flexibility to use the funds available to them without constraint but this will almost certainly be more than offset by the scale in reduction in their funding as a whole as both mainstream and discretionary public funding streams are cut back. An additional uncertainty is introduced into potential private financing arrangements by the current weaknesses and risk aversion within the banking system.

Although some small opportunities might remain, this is not likely to be a strategic financing method

5.27 Many discretionary grant schemes are being reduced but some opportunities remain e.g. small grant support for renewable energy infrastructure and some types of social infrastructure.

5.28 However, these opportunities do not represent a strategic financing mechanism for infrastructure in Scarborough.

Loans

5.29 Some approaches to funding seek to address funding gap issues with loans. However, there are limits to the way that loans can be used in the circumstances in the Scarborough borough. These are as follows.

- A loan is not another form of so called 'gap funding'. It can only be the answer where the problem is simply limited to the timing of costs and receipts.
- A loan needs to be repaid with interest which will accumulate until revenues are available to start repayment. These compounding effects can significantly add to costs especially when there is a long timescale involved before payback.
- There are likely to be severe difficulties in finding lenders who are prepared to accept the risk of non-payment or delayed payment. This is an issue where the repayments will be made from planning contributions and where lenders are in effect relying on the contributing development going ahead on schedule and generating the necessary funds. Many take the view that property development is

an inherently risky, cyclical activity and highly geared activity are thus reluctant to lend without some form of underlying guarantee.

5.30 We have not assumed that loans will be used to finance infrastructure in Scarborough borough.

Local Authority Bonds

Local Authority Bonds would require central Government support which is not forthcoming

5.31 Local authority bonds are known as Muni Bonds in the USA where they offer a means of financing schemes of this sort and are actively traded. Municipalities in the USA have traditionally had more practical and financial independence and the Federal and State Governments have been more ready to allow them to face the consequences of a lack of financial rectitude.

5.32 London Borough of Wandsworth is undertaking work in this area, but we think that it is premature to pin a funding strategy on this possibility.

New Homes Bonus (NHB)

NHB may form a funding stream

5.33 One of the Government's proposals to incentivise the development of new housing is its proposed New Homes Bonus scheme.

5.34 The Localism Bill announced that the scheme would start in April 2011. The scheme is intended to be a permanent part of local Government Financing. For the purpose of this analysis, we assume that it will continue throughout the plan period.

5.35 CLG has an on-line calculator in order to estimate potential theoretical contributions from the initiative.13 We have included assumptions about possible rates of NHB in the section on funding.

5.36 Note, though, that New Homes Bonus funding will be funded by Central Government by using the funding previously allocated to Local Authorities in the Housing and Planning Delivery Grant (£250m national funding for 2010/11) and taking £250m per year off Local Authorities formula grant.

5.37 Given that a) the NHB replaces a large amount of mainstream funding to local authorities, and b) local authorities will have flexibility on how to spend this (un-ringfenced) grant, it is highly likely that local authorities will want to use NHB backfill the gap created by the lost funding.

5.38 Consequently, we think that it is unwise to assume that all NHB will be spent on infrastructure to support growth. We have assumed that only a portion of NHB is spent in this way, with the remainder going to broader Council spending priorities.

[13] See http://www.communities.gov.uk/housing/housingsupply/newhomesbonus/

5.39 New Homes Bonus funding is not paid on granting a consent. Payments are unrelated to planning permissions granted. Instead, they are calculated on the basis of the total council tax register at a point in the future. As such, any payment for new development is unlikely to arrive with the Council for a number of years.

5.40 Local authorities will be paid in line with the local government finance timetable.

Prudential borrowing

Local authorities' prudential borrowing powers could be used more aggressively – but are likely to be closely scrutinized

5.41 Scarborough borough could use its prudential borrowing powers to effectively advance funding for key elements of infrastructure in anticipation of planning contributions or other possible increases in their income.

5.42 The point was made earlier that developer's capital is expensive. By contrast, the financial cost of public sector capital is much lower. There are opportunities to improve the economics of development by delaying the implementation of infrastructure schemes for as long as possible and using public funds to pay for what is required on an interim basis with repayment once the proceeds from development begin to materialise.

5.43 Repayment could perhaps come from the proceeds of a CIL, if put in place.

5.44 Historically, local government financial management practices have been conservative and in any event, it is possible that the Government will constrain their ability in this respect. The New Local Government Network points to the potential of the substantial and often underused asset and reserves base of local authorities but also says that, "the indications from the Treasury are that the current latitude in the prudential borrowing regime is far from certain and that local authority asset management will be heavily scrutinised".[14]

5.45 We have not assumed that prudential borrowing makes a contribution to infrastructure funding in Scarborough borough.

Conclusion

5.46 Our review suggests that:

- Tax Increment Financing requires major schemes to be viable and we do not consider there is likely to be such a scheme to justify taking it forward.
- Local Asset Backed Vehicles require significant amounts of land in public ownership to be worthwhile. It may be possible to take an LABV forward. This would require separate study. We have not assumed that any separate finance is available through a LABV in this study.
- Private finance Initiative is not likely to make a contribution to financing new infrastructure. Given the current economic climate, it is unlikely that public bodies will be willing to enter into these long tern commitments.

14 New Local Government Network *Capital Contingences: Local capital finance in an era of high public debt*

- In the current economic climate the likelihood of upfront grant or loan payments from the public sector is very small, although it may re-emerge slowly in the future over the life time of the Core Strategy.
- The public sector could undertake to make periodic payments using revenue raised from its own activities. This is unlikely though to raise significant amounts of money each year.
- The New Homes Bonus could bring in significant funding. However, this is not ringfenced for infrastructure delivery. A share is expected to go to other local authority priorities to compensate for funding lost through other sources.

6 INFRASTRUCTURE IN THE BOROUGH

6.1 This report now moves to look at the infrastructure needed in the borough over the plan period.

6.2 In each instance, we answer the following questions.

- What are the Infrastructure requirements generated by future growth?
- When is infrastructure needed?
- Who will provide it?
- What are the costs?
- How can new infrastructure be funded?
- What are the priorities?
- Are there any issues, dependencies and barriers to growth?

7 AMBULANCE

Introduction

7.1 In this section we examine how the proposed growth in Scarborough Borough affects the requirements, costs and funding of ambulance services in the Borough.

Context

7.2 Ambulance services in Scarborough Borough are provided by the Yorkshire Ambulance Service NHS Trust ('the Service'). Current provision in Scarborough Borough is as follows:

- There are three ambulance stations: at Scarborough, Filey and Whitby
- Scarborough has one ambulance 24/7 and one 16 hours (8-midnight) plus 3 or 4 response cars
- Filey has one ambulance 24/7
- Whitby has one ambulance 24/7 and one 16 hours (8-midnight) plus one response car.

7.3 Seen at a borough-wide level, demand is significantly higher in summer because of the seasonal increase in population arising from tourism, and the service is very stretched during that period.

7.4 The requirement for ambulance services is set by national targets to respond to 95% of emergency incidents within 19 minutes and 75% of life-threatening incidents within eight minutes. The Organisational Research into Health (ORH) process identifies the provision the Service needs to make to meet these targets. This takes place within the context of rising demand for ambulance services: according to the DoH the number of 999 calls for ambulances has increased by one-third in the last five years.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

Current demand means that a new station is required in the short term

7.5 The ORH process has identified a requirement for one more ambulance 24/7 to cover the current level of demand in and around Scarborough within target response times. 24/7 cover will require 13/14 additional staff. As there is no possibility of expanding the current ambulance station, this will require a new facility on the outskirts of the town. The Service hopes to provide this in the next 6-12 months.

Subject to confirmation in an ORH study, there may be a requirement for an additional ambulance 24/7 south of Scarborough by 2026

7.6 A detailed assessment of the requirements arising from growth will require an ORH study, but this will take place in response to pressures on the service as the pattern of demand arising cannot be predicted with sufficient accuracy to make 'up-front' provision. The Area Manager's initial view is that the level of growth proposed for South Scarborough may lead

to a requirement for the Service to provide another ambulance 24/7 to the south/south-east of the town by 2026, particularly when summer demand is taken into account.

7.7 The precise nature of the additional service provided will depend not only on a higher population from new housing, but also on other operational factors such as demand (which is rising independently of population change) and hospital facilities/community secondary care provision. Ambulance stations do not have tightly drawn catchment areas, so the possible requirement for additional provision cannot be linked to a specific growth area, but it does relate generally to growth in the south of the Borough.

The Service would propose to rent premises, so the capital costs are modest

7.8 The Service estimates that the costs of acquiring a lease and converting a property for its use will be of the order of £25,000, although we have conservatively allowed for £50,000 in our calculations. Subsequent running costs would be of the order of £620,000 per annum.

How can new infrastructure be funded?

The service is funded by the PCTs

7.9 The Ambulance Service is funded through service level agreements with PCTs. Bradford PCT is the commissioning agent for the Yorkshire Ambulance Trust, who would need to approach them for an increased allocation for construction and equipping an additional ambulance station at Scarborough, together with the running costs.

7.10 Ultimately funding for the Service forms part of the costs of the PCTs it covers, and this in turn is related to their populations.

7.11 However, no funding has been identified.

What are the priorities?

7.12 We have rated these as an “other” priority. This means that the provision of this new infrastructure is not likely to be legally required by statute or regulation in order for the development to proceed. We expect that further work will need to take place following this commission to refine local priorities.

Issues, dependencies and barriers to growth

7.13 The current proposal for an additional facility and ambulance results from the need to meet targets now, and is not related to growth.

7.14 Further work will be needed to determine exactly what the requirements of growth will be. Failure to provide additional facilities when needed for the increased population will result in the Service being unable to meet the target response times.

7.15 However, there is some flexibility as to when additional provision is made to maintain response times, so Ambulance Services are not a showstopper.

8 FIRE

Introduction

8.1 In this section we examine how the proposed growth in housing and employment affects the requirements, costs and funding of fire and rescue services in the Borough.

Context

8.2 The fire and rescue service in Scarborough Borough is provided by North Yorkshire Fire and Rescue. The service is delivered from the following facilities in Scarborough:

- One wholetime fire station (crewed 24/7) in Scarborough itself.
- One day crewed station in Whitby (crewed 08.00 – 18.00 by firefighter staff who are also on call outside these hours)
- Five retained stations (part-time firefighters) in Danby, Filey, Lythe, Robin Hood's Bay and Snainton
- One volunteer station in Goathland.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

8.3 The Fire Service considers that the proposed growth will not give rise to a need for additional provision. The current stations cover the main areas and have quick response times. Modern dwellings have hard-wired smoke alarms and pose relatively little danger, so the proposed growth will not add significantly to the demands on the Service in Scarborough Borough. Because of this, and because the Service operates on a settlement-wide basis, there are no constraints on growth in individual areas arising from the level of provision of Fire and Rescue Services.

8.4 Prevention plays a major role in managing demand. Examples include:

- Seeking the provision of sprinklers in dwellings occupied by vulnerable groups
- Ensuring that houses in hard-to-reach areas have smoke alarms.

8.5 The Service constantly reviews the level of provision required through its Integrated Risk Management Plan. This planning process reviews fire station locations and their appliance and equipment provision. A review of fire cover for the area is expected in future and it is possible there may be a need for increased provision in the southern area of the Borough. This may involve a move of part of Scarborough Fire Station's equipment rather than all-new provision.

8.6 As this possible additional requirement is tentative, and appears to be driven by existing conditions as much as by future growth, we do not include it among the requirements arising from growth in Scarborough Borough. We therefore assume that the costs for the Fire Service of proposed growth are nil.

How can new infrastructure be funded?

8.7 The question does not arise as there is no need for additional provision.

What are the priorities?

8.8 Given the lack of requirements, prioritisation has not been undertaken.

Issues, dependencies and barriers to growth

8.9 As there is no need for additional provision, fire infrastructure issues do not pose any barrier to growth in Scarborough Borough.

9 POLICE

Introduction

9.1 In this section we examine how the proposed growth in housing and employment affects the requirements, costs and funding of the police service in the Borough.

Context

9.2 Policing in Scarborough Borough is provided by North Yorkshire Police. The service is delivered from four police stations.

9.3 The largest station is at Scarborough, which is open from 8am to midnight. The others are:

- Whitby, open 8am to 8pm
- Eastfield, open 9am to 5pm
- Filey, open 9am to 5pm

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

9.4 What follows is an initial estimate based on the high level information provided: it will be possible to work up more detail when housing types and phasing is available in more detail. But in summary, the Police have identified the following requirements:

- A Response Base
- Two Local Police Stations and potentially a third local police station or access to a community room/space in Scalby
- 'Upfront' recruitment and training costs

9.5 We provide more detail on these requirements below.

Response Base

9.6 Based on the likely socio-economic profile of the area, the large volume of housing proposed for Middle Deepdale and Cayton and the expansion of the Strategic Employments sites and increase in traffic that they will bring it is anticipated that there will be a requirement for a response base for police serving the area. It would serve as a base for a policing group consisting of Police Constables, Police Community Support Officers, traffic police and Road Policing Groupif needed.

9.7 The building will not have any specialist facilities (e.g. custody). It will need to provide space for office accommodation, briefing room, locker room, shower/wc facilities, mess and parking facilities.

Local Police Stations embedded in community facilities

9.8 On the scale of growth proposed, Local Police Stations will be required at Cayton, Middle Deepdale and potentially Scalby. These will be a presence in the community and would ideally form part of joint provision of community facilities serving the new housing. Facilities

needed: an office and interview room, with access to a meeting room, toilet facilities, parking/cycle provision etc. They will not be manned fulltime.

Bringing forward provision

9.9 NYP wish to be able to have a policing presence in new developments from an early stage. Income from the Council Tax precept will not be achieved until the properties have been constructed/occupied. They will therefore be seeking support/ funding for recruitment and training of additional officers 'upfront' to bring forward policing in growth areas.

9.10 We do not consider that such a requirement is permissible under the regulations because training is not a capital item. Whilst the changes to the CIL Regulations, as identified in the Localism Bill, will allow for the ongoing costs of provision to be charged, it is questionable as to whether this is intended to include training of staff which is a core part of the police service and as such, must be covered by its core budgets. Once the changes to the CIL Regulations are clarified, it may be that such items can be included. In such circumstances, a review of the CIL may be appropriate.

How much will these facilities cost?

9.11 Costs are as follows:

- Response base: a rough guide of the space requirements for a response base/facility is 150 m², and based on an estimated construction cost of £2k per m² it would could cost in the region of £300,000 (this excludes any car parking provision).
- Local police stations embedded in community facilities: If Local Police Stations are provided by developers as part of the overall community provision, (say, to a community/health centre, or other shared provision) then costs would be less than a standalone facility. Assuming a requirement for about 20 m² and typical community centre construction costs of about £1,500 per m², a Local Police Station would cost in the region of £30,000, less any savings from joint provision. The total costs of three would therefore be £90,000.
- Parking spaces could be nil direct cost if the Council could make existing spaces available.
- Recruitment and training costs will be identified when the numbers of additional officers can be identified. The Police state that recruitment and training costs should also be provided by developers, although we note that Circular 05/05 refers to revenue costs in relation to maintenance. Given that they have not been quantified, we have not made any allowance for these costs in this study. (Even if they were to be quantified in future, the development process has typically not paid these costs in other areas).

9.12 Total identified costs are of the order of £390,000.

How can new infrastructure be funded?

9.13 The funding of the Police-related elements of infrastructure are as follows:

- Ideally NYP would wish provision of Local Police Stations to be made directly by developers as part of other community facilities they provide. This might be in lieu

of a cash payment as part of a 106 agreement or CIL. They would also prefer direct provision of a Response Base in the Cayton/Middle Deepdale area (location to be subject to review of plans, costs/availability).

- The Response Base could also be provided by developers as the building does not have any specialist elements, although this would ordinarily be a stand-alone facility. This could be the subject of further discussion (depending on location and other facilities in that area).
- Recruitment and training costs would require a cash contribution, part of a 106 or CIL. These costs have not been quantified, and so funding cannot be calculated.

What are the priorities?

9.14 We have rated these as an "other" priority. This means that the provision of this new infrastructure is not likely to be legally required by statute or regulation in order for the development to proceed. We expect that further work will need to take place following this commission to refine local priorities.

Issues, dependencies and barriers to growth

9.15 No immediate barriers to growth have been identified.

9.16 NYP wish to be involved in the planning of the new development areas so that they are able to have an input on provision for the facilities described above.

9.17 NYP do wish to see resources made available for them to have a presence in the growth areas from an early stage. While there is some flexibility in the relationship between housing growth and police resources there is a point at which the quality of service will suffer.

10 LIBRARIES AND COMMUNITY CENTRES

Introduction

10.1 In this section we consider the infrastructure requirements for community centres and library provision.

Context

The provision of library services

10.2 North Yorkshire County Council provides the library service in the district. There are currently seven libraries located within the main towns or larger urban areas, with mobile libraries serving the rural villages/areas.

10.3 All branch libraries offer books and information, work in partnership with Scarborough Borough Council to deliver Access to Services (local council info) and offer public internet access..

Defining community centres

10.4 Community centres should not be confused with community facilities.[15] Here, we are looking at community centres only. A community centre is a meeting place used by members of a community for social, cultural, or recreational activities.

What are the infrastructure requirements arising from growth? Who will provide it? What are the costs?

There are aspirations for new community centre provision at two strategic sites

10.5 In our consultations with Scarborough Borough Council, there was a desire to provide community centres / neighbourhood centres as part of the infrastructure requirements for both South Cayton and Scalby. Other sites are not considered to be of a sufficient scale to warrant new provision as a result of growth. The expectation is that the smaller sites can use existing provision.

10.6 There is some existing provision around the South Cayton and Scalby strategic sites. Consultation has suggested that this appears to be insufficient to cope with further growth, although closer study would be required to show fully convincing evidence of need (which could be necessary if these requirements were to form part of a S106 agreement).

[15] The definition of community facilities in planning is very wide. It includes a wide range of facilities including shops, post office, schools, meeting places, open space and green corridors, burial grounds, libraries, art galleries, museums, doctor's and dentist's surgeries, places of worship, community centres, youth provision, heritage and arts facilities. The Use Class Order for non residential institutions (D1) includes such uses as libraries, schools, health centres, places of worship and so on. We have dealt with many of the facilities listed above (such as schools and doctors' surgeries) separately in this report. Other facilities such as shops, pubs, dentists, places of worship and post offices, are outside our remit given that they are privately provided. These are a matter of spatial planning in terms of identifying policies and broad allocations in planning documents.

- Scalby has a church hall, and the Newby and Scalby Village Hall which is run by the Parish Council. Consultation suggests that this is space very well used (on evidence of room bookings). This suggests that provision is broadly at capacity and will possibly not meet the needs of further growth.
- Cayton has Jubilee Hall. Again this appears to be well used. The Parish Council have ambitions for a new community centre. The developer of the recently approved Cayton site is gifting land on the development to the parish council in order to provide a site for the construction of new facilities. We note, though, that this would still require the parish council to allocate considerable funds to the construction of the new facility.

We have used national standards to suggest the level and cost of new community centre provision (excluding land cost)

10.7 The requirement for community centres tends to depend on local needs, often based on surveys of communities residing in an area. We have used our own information taken from experience elsewhere and substantiated this with information from standards used elsewhere to ensure these recommendations are appropriate16.

10.8 Requirements can vary from 0.2sq m to 1 sq m per housing unit. For this assessment, we have adopted a requirement of 0.4sqm per household unit as a guide.

10.9 Regarding costs, typical build costs (which exclude land costs) range from between £1,200sq m to £1,800 sq m. Again based on our ready reckoner, we propose a cost figure of £1,500 per m2. Thus a centre for a community of 3000 dwelling units (for example, South Cayton), would result in a requirement of approximately 1200 m2 and would cost approximately £1.8m.

10.10 We have used the above costs and requirements standards in our spreadsheet calculations to arrive at a broader estimation of community centre costs.

There may be ways of reducing these costs, in order to provide community centres more efficiently

10.11 Given the imperative to a) ensure that development remains economically viable, and to b) use public funding efficiently, it may be wise to investigate other methods for the provision of community centres for the new strategic sites. Stakeholders around the country favour the development of joint multi purpose centres that provide for a range of uses, including community, social, health, learning, and sports facilities for the sustainable urban extensions. There may be economies that can be achieved with the provision of these multi-use centres at both South Cayton and Scalby. This approach has also been adopted locally at Falsgrave CRC and Green Lane, Whitby.[17]

[16] Sources used have been the Leicestershire and Rutland Rural Community Council and Sport England

[17] These resource centres include business units, community facilities, educational space, sports hall etc. for a wide range of flexible uses. Both of these were funded with significant external funding sources - Falsgrave as part of the SRB programme and Green Lane with ERDF, Yorkshire Forward, NYCC Community Fund and a some Council money.

10.12 This approach may create be some penalties. One may be around flexibility – for example, school premises would not be available during the school day (even though that is relatively short). Another is that there could be a change in the management ethos: community centres are currently run by the Parish council or local management committee on behalf of their communities as a community resource. Even so, the potential savings can make a good case for tolerating these disadvantages.

10.13 The actual configuration, cost and management of these will vary considerably in each area, and would need to be investigated as masterplanning processes developed.

Additional libraries infrastructure is not required

10.14 Our assessment is based on discussion with the County Libraries General Manager, who in turn has liaised with the local librarians at Scarborough and Whitby. The main point to note is that the growth in terms of potential increase in numbers using the existing library service would be welcomed. There is no need for additional infrastructure to support the level of growth proposed, as there is sufficient capacity to cope with the planned growth. Thus there are no new additional capital costs or funding implications arising from the proposed growth.

10.15 An area of possible concern was if the level of growth was to give rise to a substantial level of 'housebound' residents, this might be the case if a substantial older persons settlement was granted consent. If this is the case, there could be additional revenue cost implications on the service.

10.16 The County have produced a new Library Strategy in 2011 and suggest that all libraries will remain open, though at reduced hours. They have an ongoing process of service review and would find it helpful to be kept informed of growth plans.

How can new infrastructure be funded?

Funding for community centres has historically come from grant funding

10.17 Most community centres developments are dependent on external funding in the form of grants or developer contributions to support the capital cost of providing the infrastructure and for major extensions / repairs.

10.18 Around the country, grants used include Lottery, Charities, local authority grants administered via the Rural Community Councils and Landfill Grants. Similarly, in Scarborough, community centres are funded by a range of external grants, fundraising, Parish Council funds.

10.19 These sources of funding are not likely to increase in the foreseeable future. In particular, lottery funding too has been reduced, partly as a result of the fact that funding is being diverted to pay for the Olympics.

There is no budget line for new community centre provision

10.20 Borough Council and the County Council do not have a specific fund for the provision of new community centres. . The Parish Council position varies depending on the resources and priorities of each parish Council but in general it is clear that there is no ready money available for the creation of new community centres to cope with growth.

10.21 Consequently, there is a funding gap for the creation of new community centres to cope with growth.

We have not analysed funding for libraries

10.22 We have shown above that the libraries service states that no infrastructure is required. Therefore no funding solutions have been pursued.

What are the priorities?

10.23 We have rated these as an "other" priority. This means that the provision of this new infrastructure is not likely to be legally required by statute or regulation in order for the development to proceed. We expect that further work will need to take place following this commission to refine local priorities.

Infrastructure timing assumptions

10.24 We have assumed that the infrastructure will be needed over the same build out period as the housing development. In the spreadsheet model we have pro-rata'd infrastructure costs in line with the assumed phasing of development.

Issues, dependencies and barriers to growth

Stakeholders are nervous of ongoing maintenance and other revenue costs arising from community centre provision

10.25 Feedback from stakeholders raised concerns about identifying agencies / communities willing to take on the management and funding.

The requirement for efficient infrastructure provision means that the concept of multi-use centres should be pursued with other partners

10.26 As mentioned above, multi-use centres are coming up the agenda as a way of efficiently providing for community needs.

10.27 Otherwise, there are no obvious delivery issues.

11 EDUCATION

Introduction

11.1 In this section we examine the education infrastructure requirements stemming from the proposed housing growth for the following services:

a) Early Years provision – 2 - 4

b) Primary Education – 4 - 11

c) Secondary Education 11 – 16yrs

d) Post 16 and Special Education Needs (SEN)

11.2 Nursery and higher education has not been included in this assessment.

11.3 It is important to remind the reader that we were appointed in autumn 2009. Much of the analysis in this report was undertaken during early-mid 2010, and so reflects findings at that point in time. In particular, education funding has changed since this report was written.

Context

11.4 Education infrastructure is provided by North Yorkshire County Council (NYCC). Our assessment of this section has been prepared in dialogue with the Children & Young People's Service of NYCC. We have utilised NYCC information relating to current and forecast roll numbers for the various schools in Scarborough, Filey and Whitby.

11.5 In arriving at our estimations, we have taken account of approved programmes to deal with any surplus primary education capacity. Account has been taken of any surplus capacity at secondary schools and the implications of the proposed changes to the way Post 16 education will be managed in the future.

Agreed Assumptions

11.6 The following assumptions have been agreed with NYCC:

- Use the data relating to the number on roll as at September 2009 (having considered future forecast data).
- Primary and secondary pupil yield ratios (of 0.25 and 0.13 per dwelling respectively)
- Appropriate broad groupings of schools to coincide with the indicative directions of growth map.
- Use of DCFS (now DfE) school expansion costs and location factors as at 2008 /09 to cost any new requirements.

Post 16 Education

11.7 The management of Post 16 provision has been reorganised in response to the Government's proposed changes in the leaving age in 2013 and 2015. NYCC is now

responsible for Post-16/Further Education (FE) provision, having taken over from the Learning and Skills Council (LSC).

11.8 Given that there are still a number of areas of uncertainty around this it should be borne in mind that these conclusions may change in future as changes bed in.

11.9 Although no specific infrastructure requirements have been identified at this stage, future capital expenditure may be necessary to accommodate growth and should therefore be monitored closely.

Special Education Needs Education

11.10 Special Education Needs (SEN) education is primarily integrated into mainstream schools and no specific infrastructure requirements have been identified at this stage.

What are the infrastructure requirements arising from growth? Who will provide it? What are the costs?

11.11 The education infrastructure requirements and costs to meet this requirement are summarised in the Table 12.1 below. This takes account of existing capacity to meet the needs arising from the growth. The total estimated cost to meet the education needs of the proposed growth is just under £32m (£31,997,560).

Table 11.1 Schools Infrastructure Requirement and Cost

Area	Type	Hsg Growth	Growth requirements	New* requirements	Cost per child**	Total Growth Cost
Scarborough (North Scalby, Central, and South Scarborough other)	P& EY	2020	505	347	£12,257	£4,253,179
Scarborough (North Scalby, Central, and South Scarborough other)	Secondary	2020	263	Surplus	£0	£0
South Scarborough (Middle Deepdale, North Middle Deepdale and South Cayton)	P& EY	5000	1250	1177	£12,257	£14,426,489
South Scarborough (Middle Deepdale, North Middle Deepdale and South Cayton)	Secondary	5000	650	571	£20,293	£11,587,303
Whitby	P& EY	415	104	Surplus	£0	£0
Whitby	Secondary	415	54	Surplus	£0	£0
Filey, Hunmanby and Southern Villages	P& EY	325	81	31	£12,257	£379,967
Filey, Hunmanby and Southern Villages	Secondary	325	43	43	£20,293	£872,599
Northern villages	P& EY	125	32	39	£12,257	£478,023
Northern villages	Secondary	125	17	Surplus	£0	£0
Western Villages	P& EY	200	50	Surplus	£0	£0
Western Villages	Secondary	200	26	Surplus	£0	£0

NOTE: Due to the make-up of existing school catchment areas we have used slightly different area boundaries in this table.

*New requirements is based on total growth requirement, less existing surplus capacity (after deducting requirements stemming from current consents).

** Cost is based on the 2008/09 DCSL extension multiplier and locational factor, based on projected pricing levels at Q4 2008. Allowances have been added for external works, furniture, and equipment of £383 and professional fees at 10%. This excludes ICT equipment, site abnormalities, site acquisition, costs, VAT.

How can new infrastructure be funded?

11.12 At the time of writing[18], NYCC has recommended that we assume no mainstream funding for the identified education costs arising from the growth. However, we recommend this is something that is discussed in more detail with NYCC, particularly in relation to any future

[18] It is important to remind the reader that we were appointed in autumn 2009. Much of the analysis in this report was undertaken during early-mid 2010, and so reflects findings at that point in time. In particular, education funding has changed since this report was written.

developer contribution policy and mainstream education funding for any remodelling requirements.

11.13 The S106 agreement for the Middle Deepdale development is not signed at the time of writing. However, it appears sensible to assume that it will be signed in the near future. In line with the emerging Section 106 agreement, we have assumed that S106 funding will be available for education provision in the Middle Deepdale/ South Scarborough area[19]. We have assumed that £2.5m–worth of funding will be available for a one form entry primary school, serving the Middle Deepdale development.

Issues, dependencies and barriers to growth

11.14 It is important to note that the numbers on roll are constantly changing, and will be affected by population changes, migration, changes in government policy and capital programmes. Our assessment is based on current information; actual requirements will need to be considered in more detail at master planning and planning application stages.

11.15 The table below is an extract from the RTP Infrastructure Planning Toolkit relating to education infrastructure. This highlights the possible areas to pay particular attention to in terms of infrastructure phasing and delivery.

11.16 The combined growth at Scarborough South and Cayton has been classified as red in the medium to longer term because education infrastructure will require very early planning. There is no capacity at existing schools to expand and accommodate the requirement resulting from the proposed growth. Any new school development will also have implications on the remodelling of existing schools in the area and so early discussions should be initiated to support the proper planning of the education infrastructure needs for this area to ensure housing delivery can commence in 2016 onwards.

11.17 Similarly, a note of caution, amber lights has been included for the northern villages to highlight concerns about primary school capacity. Early discussions should be entered with the service provider to devise a plan of action to deal with this issue.

[19] Telephone conversation with S106 officer on 16th November 2011

Table 11.2 Education barriers to growth (assuming no education investment)

YEAR	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Scarborough - Scalby area																		
Education																		n/a
	SN and SC considered as one group for education. Some primary schools serving growth in these areas will be changing as part of the Primary Capital Programme - thus reducing primary capacity, whilst more primary capacity will be needed for the proposed growth. Early engagement into these programmes could influence growth requirements in this area. There is secondary capacity at Raincliffe and Scalby Tech to serve this area.																	
Scarborough Central & other north																		
Education																		n/a
	SN and SC considered as one group for education. Some primary schools serving growth in these areas will be changing as part of the Primary Capital Programme - thus reducing primary capacity, whilst more primary capacity will be needed for the proposed growth. Early engagement into these programmes could influence growth requirements in this area. There is secondary capacity at Raincliffe and Scalby Tech to serve this area.																	
South Scarborough																		
Education																		n/a
	SC and Cayton considered as one group for education. All schools in this area are very stretched and will require complete new infrastructure to meet growth requirements. Early consultation with education providers will be crucial to enable proper planning to accommodate growth post 2016.																	
Whitby																		
Education																		n/a
	There is capacity in all Whitby and rural primary, secondary and post 16 schools to accommodate growth requirements, and secondary capacities is forecast to double																	
Filey and Hunmanby																		
Education																		n/a
	There is need for some expansion of primary and secondary provision																	
Northern Villages																		
Education																		n/a
	Lindhead Primary school is at capacity so will need to ensure scope for further expansion before proceeding. There is capacity for secondary at Scalby Tech in Scarborough																	
Western Villages																		
Education																		n/a
	Short term fluctuations will need to be carefully monitored due to recent consents, some primary schools will be stretched and there is also unlikely to be any capacity at Filey Tech if consents are taken up.																	
Southern villages																		
Education																		n/a
	There is surplus capacity at a number of primary and secondary schools (Scalby Community) that could serve the growth in this area - no issues identified.																	
Scarborough South - Business Park Expansion																		
Education																		n/a
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																	
Scarborough North - Business Park																		
Education																		n/a
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																	
Central Scarborough - retail																		
Education																		n/a
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																	

Source: RTP

11.18 Finally the Scarborough North and Scarborough Central areas have been identified as amber in the short term due to work currently about to commence on the Primary Capital Programme which will reduce primary school capacity. Early discussions with the service provider should help to ensure careful consideration is taken account of possible future growth needs in the area.

12 PUBLIC SPACE, PARKS, SPORT AND LEISURE

Introduction

12.1 Open spaces, public space, parks, sport and recreation all underpin people's quality of life. In this section we examine the needs generated by growth.

Context

The definitions we are using

12.2 In PPG17, open space is defined as "all open space of public value, including not just land, but also areas of water such as rivers, canals, lakes and reservoirs which offer important opportunities for sport and recreation and can also act as a visual amenity"[20]. This includes parks, green corridors, outdoor sports facilities, allotments, community gardens, cemeteries, civic spaces, including civic and market squares, and other hard surfaced areas designed for pedestrians. It also includes amenity greenspace (most commonly, but not exclusively in housing areas) –and informal recreation spaces, green spaces in and around housing, domestic gardens and village greens.

12.3 Sport and recreation is not formally defined for the purposes of PPG17. However, for our purposes in this plan, we have followed PPG17 guidance on the definition of this category. This includes swimming pools, indoor sports halls and leisure centres, and so on.

Our scope

12.4 In this section, we have covered parks, amenity green space, playgrounds, playing fields and leisure centres. We have dealt with strategic green infrastructure in a separate chapter.

12.5 In this plan, we have not covered private, voluntary and specialist sports provision including for instance indoor and outdoor tennis clubs, stadia, and golf courses. Nor have we covered cemeteries. This is because there is typically a very limited number of cases when significant investment in cemeteries is needed. We have therefore treated these requirements and costs as de minimis (significant investment in cemeteries is usually only required when land costs are particularly high).[21]

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

Our method in determining requirements and costs

Scarborough Borough has completed a PPG17-compliant assessment of open space

12.6 This assessment was broadly completed in late 2010 and so provides an up to date picture of current provision. The assessment considers both the quantity of provision and also the

[20] PPG17 Annex, para 1

[21] We are aware that some local authorities' PPG17 assessments have picked up cemetery requirements. This is entirely proper given their local focus and higher level of detail.

accessibility and quality of sites. This incorporates criteria that are necessarily more subjective and therefore more difficult to apply clear rules to when considering their potential to support growth.

12.7 In such circumstances, the approach has been to follow the PPG17 assessment which identifies existing facilities which are either classed as 'below average' or 'poor'. In such circumstances, these facilities are considered to currently not contribute towards local need. Therefore, if they are upgraded, they would be able to provide a contribution towards new growth. Certainly in an area where there is an existing surplus of quantitative provision, this is a more efficient way of addressing the needs of growth than providing new facilities.

We have taken a flexible approach. We have used local space standards and, where necessary, compared these to requirements using a broader review of standards elsewhere

12.8 We have reviewed local requirements in the borough and looked at the issues covered by each of the standards. It is not the role of this study to critically review the open space standards that the Borough Council adopts. In certain circumstances, the aims of the PPG17 assessment have been necessarily different to those in this study. In such circumstances, the local standards may not be appropriate so we have undertaken an equivalent exercise using standards from a broad range of good practice sources. We have attempted to make these different standards more tractable by converting them to a uniform rate per thousand population. We have adopted the household size from the population forecasts of 2.11 persons per household.

12.9 This comparison has been undertaken in recognition of the pressure that there will be on developer contributions and mainstream funding. It recognises that many of the standards commonly adopted are aspirational in nature and seeks to illustrate the impact of applying those standards on deliverability.

We have applied these requirements to all housing development in all areas, across sites of all sizes

12.10 The PPG17 Annex points out that, as a matter of policy, some authorities do not require either on-site provision or a contribution to off-site provision for developments of less than a set number of houses. The basis for this is that the cost of negotiating and administering a planning agreement is higher than the value of the benefit gained for the local community. However, they should bear in mind that (say) 50 developments, each of one house, have the same aggregate impact on local greenspace and sport and recreation provision as one development of 50 houses.

12.11 Our use of uniform standards picks up the requirements of all housing development, including that on smaller sites and in the rural areas. This way we ensure that we are not supplying perverse incentives to develop small schemes, or those on greenfield sites.

We have costed these proposed open space standards

12.12 Having picked reasonable space standards, we have looked at the open space, parks and leisure requirements that these sites might have, and costed them using a set of stated comparators and assumptions.

12.13 We have taken the following approach.

- In this assessment we are concentrating on primary infrastructure. We are assuming that small scale open space provision (such as LAPs, and very small scale "pocket" open space on housing developments) are for the most part incorporated in build costs, and so do not need to be separately dealt with.
- Land costs are generally not included in these calculations. This is because the price of land will vary widely depending on development location. Those developments able to buy agricultural land for use as (say) a playing field or park will typically pay twice agricultural land values (say £20k/ha); those developments in urban areas using built up land will pay very significantly more. This is particularly relevant for space-hungry requirements, such as playing fields and parks. A more detailed approach would need to be taken on a case-by-case basis, but the lack of land costs here should be borne in mind.
- New employment development is assumed to make no primary infrastructure green space, park, sport and leisure demands.

Important caveats

12.14 The approach taken seeks, where possible, to take account of local deficits and surpluses in open space. We are mindful that the study is not seeking to address historic deficits, so addressing such deficits is only considered reasonable where it is also contributing towards addressing the requirements of new growth.

12.15 Where a facility is considered to be of 'below average' or 'poor' quality, contributions towards its improvement are considered to effectively represent the provision of new facilities. There is no way of clearly knowing how much it would cost to bring these facilities up to an acceptable standard, so the approach taken has been on a case by case basis.

12.16 It is the case that standards will have to be applied and interpreted in a flexible way to take into account varying local circumstances. In particular, there may be a need to interpret the standards flexibly in relation to areas of high density redevelopment, where the land may simply not be available to satisfy the quantitative components of the standards.

12.17 We have stated above that we have noted the possible implications of obviously aspirational planning standards. However, it should be noted that there is no reason why these standards should not continue to be used as a basis for Scarborough Borough's developer contribution strategy if the Borough Council feels that they are needed. Different local authorities place a differing emphasis on open space issues, and this entirely proper. The assessment simply seeks to highlight the implications of doing so.

Open space, sports and recreation requirements and costs

Natural parks and green space

12.18 In Scarborough there is a current surplus of provision due to the presence of the country park. Some of the surplus would serve new development in the existing built up area (550 dwellings). However, the remaining new development should be served by natural and semi-natural green space.

12.19 In Whitby there is a shortfall of space, so new development should provide additional green space where possible. The same applies to Hunmanby and the Service Villages which have a shortfall.

12.20 Like Scarborough, Filey has a surplus of provision due to the country park. There is no need to provide additional green space. The same applies to the Smaller Villages which have a significant surplus.

12.21 Based on a standard per 1,000 population of 4.25ha for urban areas and 0.85ha for rural areas, there is a total need for 62.3ha of space. The large majority of this is in Scarborough (58.0ha) and takes into account that there is no need for provision in the existing built up area of the town.

12.22 Adopting a cost for the provision of space of £10,000 per hectare gives a total cost of £623,000.

Urban parks

12.23 In Scarborough there is a surplus of provision, some of which would serve new development in the existing built up area (550 dwellings). But some contributions from this development should be required to improve Linden Road Neighbourhood Park and Albermarle and Grosvenor Crescents, all of which are either rated as 'below average' or 'poor' in the quality assessment.

12.24 In Whitby there is a large shortfall but little available space within the existing urban area to address it. New provision would need to be on edge of town either in the form of a neighbourhood park or a series of parks and gardens.

12.25 In Filey, there is a surplus of provision totalling over 4ha. New growth only creates a need for 1.6ha of space, so the existing provision is sufficient.

12.26 Based on a standard of 1.20ha per 1,000 population for urban areas (there is no requirement for urban parks to serve rural areas), there is a total need for 17.4ha of space. Again, the large majority of this (16.4ha is in Scarborough) and takes account of the fact that there is no demand for additional space in the existing built up area.

12.27 In reality, such a significant amount of space is unlikely to be provided in a number of large parks. It is more likely that a series of smaller neighbourhood parks will be provided. For this reason, it is assumed that the requirement is provided as neighbourhood parks, which we assess will cost £82,000 per hectare.

12.28 The cost of improving the existing poor quality facilities in Scarborough is difficult to assess because each case will be different. Certainly it will be less than new provision. The Borough SPD on 'Negotiation of play, Green Space and Sports Facilities in Association with new Housing Developments' gives a contribution figure towards parks and gardens of £67.73 per new resident. The 550 dwellings to be delivered in the existing built up area of Scarborough are assumed to accommodate 1,161 people.

12.29 Adding this to the new provision requirement gives a total cost of £1,505,000.

Amenity green space

12.30 Scarborough has a significant surplus of provision. Whilst for other types this would suggest no need to provide additional space, amenity space is very local to developments so is needed to support new greenfield development which cannot take advantage of existing provision. So provision is required for all new development outside the existing built up area of Scarborough.

12.31 In both Whitby and Filey there is a small shortfall which can be addressed through development.

12.32 The rural areas have requirements that are below the minimum threshold for provision of amenity green space. As such, they are considered to have no requirements. In reality their requirements will be met with direct on-site provision as part of specific developments.

12.33 Based on a standard of 1.20ha per 1,000 population for urban areas, there is a total need for 17.9ha of space. Again, the large majority of this (16.4ha is in Scarborough) and takes account of the fact that there is no demand for additional space in the existing built up area.

12.34 Adopting a cost for the provision of space of £20,000 per hectare gives a total cost of £358,000.

Play facilities

12.35 Play facilities consist of Local, Neighbourhood and Strategy Equipped Areas for Play (LEAPs, NEAPs and SEAPs respectively).

12.36 Policy state that all new development should contribute towards the provision of new facilities (either on- or off-site). In the urban areas, particularly Scarborough, off-site contributions should firstly be used to improve existing facilities that were considered to be 'below average' or 'poor' in the quality audit.

12.37 Based on a standard of 0.65ha per 1,000 population in urban areas and 1.05ha per 1,000 population in rural areas, there is a total need for 10.7ha of space.

12.38 Based on development elsewhere, LEAPs cost £40,000 each and NEAPs, £80,000. We do not have cost information for SEAPs. We have therefore assumed an average cost of provision of £50,000, based on the fact that there will be a need for a higher number of LEAPs than either NEAPs or SEAPs.

12.39 The cost of improving the existing poor quality facilities is difficult to assess because each case will be different. The Borough SPD on contributions gives a figure towards equipped playgrounds of £286.55 per new resident and informal playspace of £81.64. The 550 dwellings to be delivered in the existing built up area of Scarborough are assumed to accommodate 1,161 people and it is assumed that an equal proportion would require equipped and informal playspace.

12.40 Adding this to the new provision requirement gives a total cost of £858,000.

Outdoor sports facilities

12.41 In Scarborough there is a significant shortfall in provision which is accessible to the general public. New development must therefore contribute to needs. Contributions can be put towards improvement of existing public facilities.

12.42 In Whitby there is a significant surplus although this is largely accounted for by a large amount of provision at educational and professional institutions. Once this is excluded the surplus is reduced considerably.

12.43 There is a small shortfall in Filey but larger shortfalls in Hunmanby and the Service Villages. By contrast, there is a significant surplus in the Smaller Villages. It should be noted that all villages within the Borough (apart from Reighton, Speeton, Ruswarp and Sandsend) have access to some kind of formal outdoor sports provision.

12.44 Based on a standard of 1.10ha per 1,000 population in urban areas and 1.30ha per 1,000 population in rural areas, there is a total need for 19.0ha of space.

12.45 Across such a wide range of sports facilities, it is not possible to assign a single cost for the provision of new facilities. It is therefore considered reasonable to adopt the charge in the Borough SPD on contributions of £6.88 per m².

12.46 This gives a total cost of £1,305,000.

Other leisure facilities requirements and costs

12.47 The analysis below of the need for other leisure facilities is based on high level discussions with Council officers. The existing leisure strategy for the Borough ('Active and Healthy Lifestyles', Leisure Strategy 2005-2010) is dated and is in the early stages of being updated. As such, much of the provision identified here is not reflective of the needs accompanying growth.

12.48 Yet the nature of the facilities within this section – leisure centre, swimming pools, athletics facilities, arts facilities, etc – do not naturally lend themselves to a straightforward assessment against an expected standard. Needs are assessed more qualitatively and it is therefore necessarily more difficult to be definitive about them.

12.49 The analysis below identifies a significant number of schemes that are considered necessary for Scarborough to provide a modern leisure offer. For the purposes of this study, these schemes are considered to be sufficient to address the future needs of growth in the early years of the plan period. It will be important to reassess this position as part of any review of infrastructure needs and the CIL, if implemented.

Sports facilities

12.50 Given the nature and range of sports facilities, it is not possible to apply any reasonable standards to such provision. However, the existing leisure strategy for the Borough aims to increase participation, quality and access to sports facilities. This strategy is currently being updated by the Community Sports Network but is not sufficiently advanced to be able to input into this assessment. However, these aims are to be retained in the new strategy.

12.51 Existing provision of indoor leisure facilities in Scarborough town is currently on two sites which are geographically split (Scarborough Sports Centre and Scarborough

Indoor Pool). These sites are over 30 years old and are not appropriate for modern leisure needs. The Borough Council intends to consolidate this provision on a single site, which will be called the Sports Village, serving the whole of Scarborough. This will provide a wet and dry indoor sports facility.

12.52 In addition, the Sports Village will include a new community stadium, replacing that previously (but not currently) used by Scarborough Football Club. The existing stadium is currently owned by the Borough Council. The intention is that a stadium, accompanied by the wider range of sports on offer as part of the Sports Village complex, will provide the necessary additional revenue required to operate and manage it.

12.53 The old stadium site could then be gifted to the developer for them to redevelop. It is envisaged that, with this site considered to have potential for residential development, this will be a package sufficient to ensure that the developer also delivers the Sports Village as part of their development. It is therefore effectively funding neutral.

12.54 The Borough Council is working with other institutions to ensure that the facility address as wide a range of needs as possible. Such institutions include the University and the hospital, for which it will provide preventative health care facilities.

12.55 This proposal is being taken forward at present and the Sports Village complex is expected to be operational by August 2014. Once complete, it is envisaged that the Sports Village will be run either by a trust or a commercial body.

12.56 The Sports Village is intended to act as a hub for sports provision in Scarborough, with it being supported by several satellite facilities. Such facilities include those already provided at the rugby club, the Gymnastics Academy and the Table Tennis Centre.

12.57 Whitby is considered to have sufficient leisure provision to accommodate growth.

12.58 In Filey, the Filey Sports Partnership (a group of stakeholders in the town) is seeking the provision of a dual use leisure centre. A Lottery bid was rejected in 2001 and at present there is little prospect of it coming forward. However, a 2004 study commissioned by the Sports Partnership did show that there was a need for such a facility, a fact that is now enhanced with the additional planned growth. For the purposes of this assessment, we assume that such a facility will provide a one-court gymnasium and a 25m swimming pool. Based on costs provided by Sport England's 'Kitbag', such a facility would cost approximately £3.5m.

12.59 In terms of other needs, Scarborough Athletics Club is seeking a dual-use facility with athletics track and floodlit all-weather pitch at the Graham / Raincliffe Federation, in Scarborough. A Sports Lottery bid by the Borough Council was withdrawn in 2001 due to the limited match funding. Currently they are working with a private developer to bring this development forward.

12.60 This is therefore considered to be funding neutral.

Non-sports leisure facilities

12.61 No specific requirements for new non-sports leisure facilities have been identified. Given the nature of such facilities, it is not possible to apply any reasonable standards to such provision.

12.62 At North Bay, there is a wish to see the provision of new leisure attractions. To date this has included the construction of a 6,500 seat open air theatre as part of the Sands development.

12.63 As part of the same development it is expected that a water-based leisure attraction will be provided. An application has been submitted in November 2011 for an indoor water park.

12.64 This is therefore considered to be funding neutral.

How can new infrastructure be funded?

There is nil mainstream funding available

12.65 In light of the Comprehensive Spending Review and the significant cuts to local authority budgets, it is assumed that there is a nil capital budget set aside for the acquisition of new open space to cope with the demands of growth.

12.66 Capital investment of this sort is normally considered to be within the remit of Local Authorities but there are no dedicated mainstream sources of funding to support any investment. There are some small and specialised sources of funds for specific and narrowly defined projects but these cannot sensibly be used as a platform for strategic investment. It is not practical to assume that the Borough Council will be able to contribute significantly to capital expenditure.

12.67 We have therefore assumed that the capital cost of provision of these facilities is not available from existing mainstream funding.

12.68 Where money is available from CIL, we anticipate that these funds would be allocated to a central fund for improvements and enhancement to recreation and community infrastructure. Some of this money can then be used towards match funding lottery and other grant aid.

12.69 However, it is not possible to be precise about how successful authorities will be in attracting match funding. We have not assumed that match funding will be available.

12.70 In the previous section we indicated which non-sports leisure facilities would be considered to attract private developer funding.

12.71 It is therefore considered to be funding neutral.

We have assumed that S106 funding is available from the Middle Deepdale development

12.72 The S106 agreement for the Middle Deepdale development is not signed at the time of writing. However, it appears sensible to assume that it will be signed in the near future. In line with the emerging Section 106 agreement, we have assumed that S106 funding will be available for sports and leisure provision in the Middle Deepdale/ South Scarborough

area[22]. We have assumed that £1m will be available for sports/leisure provision from the Middle Deepdale S106 agreement.

12.73 There may be some wider community provision included in this scheme; precise details have yet to be worked up.

Issues, dependencies and barriers to growth

12.74 All the green infrastructure identified is considered to be "desirable" rather than "essential". However, it is important that the provision of green open space and play/sports facilities is made in tandem with the build out of the new housing provision. If this is not done then green open space will only be provided on the periphery of new developments, rather than as an integral part around which good design of new development is established.

12.75 Much of the provision should be made on-site so it is important that with the largest developments, off-site contributions are minimised and provision as part of the development is maximised. In reality with these big developments this is usually the case in any event.

12.76 It should be noted that, under the CIL Regulations which postdate the Localism Bill, it is considered acceptable for new development to contribute to maintenance. Whilst development may be able to provide significant amounts of new space, the high requirements for new green space will create substantial requirements for maintenance. This may create difficulties if development is also expected to pay for this.

12.77 For this reason, we have not included maintenance payments here.

12.78 As an example, a reasonable cost of maintenance for urban parks is £10 per m^2 per annum. Providing this over a reasonable period, say 20 years, creates a total cost of £16.38m for the Scarborough urban area alone. It is important to recognise equally that the Borough Council may be unable to address such requirements, so there may need to be alternative mechanisms for provision, e.g. creating a parks trust.

[22] Telephone conversation with S106 officer on 16th November 2011

13 STRATEGIC GREEN INFRASTRUCTURE

Introduction

13.1 This section looks at how growth generates needs for strategic green infrastructure.

Context

The demand for strategic green infrastructure

13.2 Local greenspace on the doorstep of new development may need to be complemented with larger scale destination sites for varied leisure and recreation experiences. Strategic green infrastructure outside the footprint of new development could also have a role to play in bringing together both existing and new communities through linking settlements and country parks, wildlife reserves, urban greenspaces, heritage sites and waterways.

13.3 However, whilst growth will bring increased pressure on existing strategic green infrastructure assets, the question is around the extent to which capacity already exists. Scarborough Borough already has remarkable natural assets (eg beaches) which should not be overlooked.

13.4 Natural England has undertaken mapping work of existing green infrastructure assets.

13.5 It should be noted that schemes with some of the attributes of Strategic Green Infrastructure appear to be in the process of being secured through the planning obligations process. For example, the South Cayton masterplan has identified a green link.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

13.6 As described in the previous chapter, a PPG17 assessment of the Borough was broadly completed in late 2010. Many of the potential strategic needs have been incorporated into this assessment and as such, have been included in the previous section.

13.7 Therefore there are no specifically identified strategic green infrastructure projects or plans identified in policy.

13.8 This position is considered to be reasonable because of the rural nature of the borough and the ease of access of the majority of the population to a range of strategic open spaces. These include both green spaces and also the coastline that runs the length of the borough. All the major settlements are located close to this coastline.

How can new infrastructure be funded?

13.9 There are no specifically identified strategic green infrastructure projects or plans identified as requirements of growth. Consequently, there is no infrastructure which requires funding.

Issues, dependencies and barriers to growth

13.10 There are no specifically identified strategic green infrastructure projects or plans identified as requirements of growth. Consequently, there are no issues, dependencies or barriers to growth identified.

14 PRIMARY HEALTH CARE

Introduction

14.1 Primary health care services in the Borough are delivered by the Scarborough and North East Yorkshire NHS Trust.

14.2 This plan needs to try to separate out a number of complex and overlapping issues. Strategic documents from the North Yorkshire & York PCT state that the provision of premises is determined by:

- Changes in demand – population changes and growth, and expanded patient choice and public expectations.
- Changes in services – new models of care, and new clinical pathways. There is currently a strong focus from the Government to improve the quality of GPs surgeries. (For example, the provision of GPs surgeries from converted private housing stock is no longer seen as adequate).
- Statutory requirements – including the DDA, and Health and Safety.

14.3 Clearly, all of these dimensions are important, but it is that portion of the first which concerns population change that is of greatest relevance this report. In particular, it is important to clearly distinguish between the current reconfiguration of health service delivery (in larger, more fit-for-purpose health centres) and the expansion in demand which results from new housing development.

14.4 However, it is the case that the health services can use all of the above drivers to help them reconfigure the way that services are delivered in order to respond to changing population sizes, distributions and profiles.

Our remit

14.5 The following areas are outside our study:

- Acute health care. We do not cover acute (generally hospital) care in this report. Our reasoning here is that PCTs, who operate as the purchasers and thus the funders of hospital services, have funding which adjusts for capitation. Note that there are a number of important nuances here, though - there are a number of other factors involved in the funding formula, such as clinical activity rates and deprivation and that funding arrangements works on retrospective data.
- Pharmacies and Optometrists. PCTs do not financially support the initial provision or ongoing costs of pharmaceutical and optometric premises. This is a private sector function. However, the PCT does have a role in advising on the optimal location of pharmacy and optometric services to ensure access and patient choice is determined by the national regulations. There is also an inspection role. The new contract for optometrists will allow the NHS to influence where services are located.
- Dental Premises. PCTs issue a contract to dentists but there are no ongoing capital or revenue issues. Dentists are contracted to provide an agreed level of units of dental activity. For this they receive an income. All running costs are charged

against this income. (However, PCTs can financially support the business rates for dental practices, the level of which is linked to the practices percentage of NHS work).

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

The PCT has undertaken demographic work and makes planning assumptions about a growing, ageing population

14.6 The North Yorkshire Joint Strategic Needs Analysis contains some high level demographic work. It identifies that the North Yorkshire population is ageing, is likely to grow faster than the national average between 2006 and 2011. Whilst Scarborough is identified as having some deprivation issues, the analysis works at a North Yorkshire level, rather than Scarborough specific level.

How a growing population translates into demand for primary health services

14.7 A rough rule of thumb used by PCTs across the country is that there should be one general practitioner (GP) for every 1,800 people. However, it is the case that GPs do run with both significantly more, and significantly fewer, people on their lists than this. In practice, there is a good degree of flexibility in list lengths and not, as might be imagined, any statutory maximum list size. It is therefore often difficult to identify a 'slice' of new provision specifically targeted at new growth.

14.8 The size of an average GPs' list means that, even if existing GPs were working at the maximum sustainable rate, 850 new homes would need to be built before a new GP would be required (assuming that the average 2.11 people lived in these new homes, and that this population was net additional to the area, which is not always the case). As a result, there is very often no requirement to provide a new GP surgery for each new development. Where there is a small growth in population this may mean extending an existing practice or extending opening hours with an additional (perhaps part-time) GP, rather than building a new practice premises.

14.9 Where new-build provision is required, 'satellite' surgeries can be opened to treat a smaller, more local population. This pattern is currently found in the Scarborough area where, for example, the practice in West Ayton runs satellite provision in Snainton and Seamer. These services are run for access to local population (particularly older people and young children), with the administrative functions carried out at the main office. Such a pattern may be helpful in responding to the demands of a new strategic site, or even a broader growth area such as South Scarborough. As the homes in the area are gradually built out, it is possible that a satellite surgery could be provided, which might then even be viable on its own as the area approaches full build-out.

14.10 Whilst 'satellite' provision might be a flexible way of addressing growth in an area, it is important to note that there are some caveats. Our work outside Scarborough suggests that satellite surgeries often find it difficult to offer the wide range of services demanded due to their size. Conversely:

- Larger surgeries would be better able to cope with the strategic direction of the PCT and acute care providers – which is to reduce A&E attendance by trying to integrate GP, out of hours GP, and A&E into one acute service that would be provided at primary care premises.
- Larger surgeries can be more economically efficient, with shared ancillary and support facilities.
- Larger surgeries can often offer wider range of co-located primary services which provides a wider choice and access for patients. The national drivers for change are to provide a wider range of services in a primary care setting.

14.11 As GP practices accept patients from within an agreed practice boundary, the location of the proposed developments will impact on some practices more than others, particularly in more rural areas where the demand for services from the increased population may fall on only one or two practices covering that area.

PCTs are being abolished in 2013. Commissioning will become the role of GPs so it is difficult to be clear about health needs and their delivery

14.12 The Government has committed to changing the current structure of primary health provision. In 2013 the PCT system will be abolished. In its place, the commissioning of services and their provision will be under the control of GPs. In the short term, this has two main effects. Firstly, and for obvious reasons, PCTs are not considering the long term needs of their provision. Secondly, with such a radical shift in provision down to the local level, it is not clear what form provision will take and how long term strategic needs are being determined.

14.13 Ultimately the power to determine provision will be with the GPs. It is not clear (to us, at least, and we think others) exactly how new services will be commissioned on large strategic developments. It may be that GP consortia themselves will be expected to exploit "gaps in the market", and move to fill them.

Capital needs resulting from new growth

14.14 Given the lack of certainty by the PCT over future needs resulting from growth, it is most reasonable to adopt a simple calculation in order to assess needs. The additional 8,085 dwellings (which excludes existing planning permissions, assumed to already have been addressed) creates a total additional population of 17,059 persons, based on an average household size of 2.11 persons. Some of this total will not provide additional patients, largely due to falling household sizes, but it is not possible to determine the likely extent of this, so is not factored into the calculation.

14.15 It is reported that provision in the North Yorkshire PCC area is between 1,500 and 1,800 patients per GP and this works relatively well. The wider 'rule of thumb' figure of 1,800 patients per GP is therefore adopted. This creates a total need for 9.5 GPs. Given the expectation that the net population will be lower, this is reduced to 9 GPs.

14.16 North Yorkshire PCT is not able to confirm whether these additional GPs are needed, or where they should be located. As such, the following assumptions are made:

- 2 or more GPs in any one location will require a new health facility to be built.

- Where there are insufficient numbers of new patients in any one development area, adjacent development areas are aggregated and assumed to be jointly serviced by a single facility.
- Needs in more rural locations will be addressed through a 'satellite' service which will not require new capital facilities.

14.17 Based on case studies on the national PCC website and costs used by other PCTs23, it is reasonable to assume that the cost of delivering new health developments is approximately £1,850 per m². A further reasonable assumption based on observed practice is that each GP and associated specialist care requires 100m² of space. This specialist care includes the full range of non-GP services such as district nursing, chiropody, osteopathy, etc. The total cost of provision of new facilities for each additional GP is therefore £185,000.

14.18 In total, the need for primary healthcare services creates additional capital infrastructure totalling between £1.45m and £1.82m. These costings are very high level and are only intended to provide a very rough indication of the scale of investment required. It is therefore appropriate to reflect a sensible range of needs.

14.19 There are also likely to be a number of smaller scale extensions and building works (such as interior remodelling, partitions and so on) which we have not allowed for in a strategic study of this nature.

Table 14.1 Growth requirements – North Yorkshire PCT

Growth location	Growth requirements	Cost	Notes
Scarborough North – Scalby, Scarborough Central and other north, Northern villages	New facility required (2 GPs) Satellite service	£370,000 £50,000 Total £420,000	New 2-GP facility required, most likely located in Scarborough North – Scalby area. This would also serve as the base for a satellite service addressing needs in the Northern Villages.
South Scarborough – Middle Deepdale, North Middle Deepdale and other	New facility required (2-3 GPs)	£370,000 - £555,000 (mid point £462,000)	New 2-3 GP facility required.
South Scarborough – South Cayton	New facility required (3-4 GPs)	£555,000 - £740,000 (mid point £648,000)	New 3-4 GP facility required.
Filey and Hunmanby	Expansion/improvement of existing facility	£100,000	Improvement and expansion of existing facility to accommodate an additional GP service plus other specialist health services.

How can new infrastructure be funded?

Some mainstream capital funding is available

14.20 Funding for health services is provided to PCTs on a capitation basis. The Trusts are expected to manage their requirements within this. They have a degree of flexibility in this

[23] Cost indications supplied by Leicestershire PCT through work on the Leicester and Leicestershire Infrastructure Assessment. These cost are not considered to alter to a great extent nationally, and so are considered relevant for Scarborough Borough for a broad study such as this.

respect including use of their own capital, realisation of surplus assets and through various flavours of the PFI.

14.21 Other sources of capital investment – predominantly private – are likely to be of growing importance in coming years. Although the situation is changing quickly, at the time of writing it is the case that

- New forms of Local Investment Finance Trust (LIFT) are available countrywide.[24] LIFT is a Public/Private Partnership (PPP) financing vehicle for improving and developing frontline primary and community care facilities. Its explicit objective is to allow PCTs to invest in new premises in new locations, not merely reproduce existing types of service.
- There is also increasing private sector involvement in the creation and funding of new health centres which are then leased to GP practices with the rent met from the PCT's revenue funding within the PCT's budgetary restraints. In Scarborough, the developer Ashley House has been used for GP rebuilds/leasing. Other development companies active in these activities include Primary Health Properties and Carecapital.

Mainstream funding should pay for new capital requirements – but there are problems

14.22 In theory, mainstream funding should provide PCTs with the necessary funds to pay for the new facilities needed. In practice it is not straightforward. Firstly, some facilities will need to be built in advance of the full realisation of the population increase, and secondly there will be a subsequent time lag before Health Service revenue funding catches up with the population growth.

14.23 Changes to the funding allocation mechanism should go some way to address this but will probably not eradicate it. Neither is it entirely clear that capitation funding responds fully to the needs of the growth. The result is that NHS budgets in areas experiencing growth are invariably under pressure.

PCTs do receive payments for premises, but do not receive specific budget for premises development

14.24 PCTs get funding for GP premises from the Department of Health. This funding is ringfenced, and is paid to GPs.

14.25 However, PCTs do not receive a specific budget for new premises developments as such. PCTs state that funding for expansion to the current provision would be at the expense of other competing priorities and ultimately may not be possible.

14.26 The revenue consequences are the important thing for the PCTs. Capital costs are embedded in the revenue costs attached to new development. Therefore other sources of funding for new facilities have to be explored. As part of this it is the PCT's policy to seek S106 contributions towards healthcare for housing developments.

[24] http://www.dh.gov.uk/en/Managingyourorganisation/NHSprocurement/Publicprivatepartnership/NHSLIFT/DH_4000519

14.27 The proposed changes to the CIL Regulations also permit some revenue funding to be included as part of a CIL charge. This is to reflect the initial set up costs of new infrastructure.

PCTs have provision in place for small scale premises improvement and extension

14.28 It is the case in most PCTs that it is possible to fund small scale improvements and expansion to extend the range of services they provide. PCTs argue that a) the first call on this investment would be to improve the current estate rather than adding additional capacity, and b) this is subject to funding being available, and subject to budgetary constraints.

The approach to capital funding for growth will need to be different in individual cases

14.29 In the case of GP practices only, the PCT pays rent (recurrent revenue) to the GPs for the use of existing premises and, where funding permits, the PCT can provide capital and/or recurrent revenue funding for new and expanded premises for new developments.

14.30 As we discussed above, in some instances, a form of private finance arrangement exists, where independent contractor GPs enter into agreements with third party developer companies that specialise in primary care developments which are then leased back to the GPs.

Our assumptions about how growth infrastructure is funded

14.31 Our brief requires us to make some estimates of the extent to which funding is going to be available to cope with the demands of growth on the health service.

Mainstream PCT funding can be assumed to pay for some growth costs. Other funding will also be necessary

14.32 The PCT is assumed to be able to cover the cost of providing the satellite service and expanding/upgrading the existing Filey/Hunmanby medical centre. The total cost for this is £150,000.

Around half of medical centre space is used for GPs, and half for other uses (such as podiatrists, physios etc)

14.33 A general rule of thumb is that 50% of any medical centre is taken up by the space needed to provide GP services. The remaining 50% is taken up by other services such as podiatrists etc.

14.34 The PCT is deemed to be funded though its capitation related formula to support its half of the costs of a surgery. However, there is a time-lag before funding catches up with a change in population. It is reasonable to support PCTs with these “time-lag” costs.

Estimating how much the PCT should be compensated to cover the funding “time lag”

14.35 In estimating how much funding should be sought from developers (and so calculate what should come from NHS budgets), our major concern is to overcome the “time lag” in

funding that we explained above. We have assumed that the PCT will not build the facilities themselves – they will pay rental costs for GP space to a separate entity, such as Ashley House or a LIFT, for the use of a new facility. Space required in a medical facility by other specialist health needs is not funded by the PCT.

14.36 As we suggested above, a general rule of thumb is that 50% of any medical centre is taken up by the space needed to provide GP services. Given that PCTs receive per-capita funding for this, then developer contributions should only cover the costs incurred in the intervening period whilst the funding formula catches up. Usually this period is three years.

14.37 All remaining GP-related costs should be covered by the PCT. However, the lack of funding available to PCTs means that a more realistic assumption is for a third party provider to do this by building the facility and then leasing it back to the PCT.

14.38 To cover the time-lag, a reasonable assumption adopted elsewhere is that the cost to the PCT of the delay in their funding arriving equates to 7.5% per annum of its share of the capital costs. In other words, if the capital cost of a new health centre is £1m, the cost of renting, running, etc, this facility to the PCT for its share of business would be £500,000 per annum. To cover this cost for three years in order to allow the funding formula to catch up with growth would require a developer contribution of £112,500 (= 7.5% of £500,000 for three years).

14.39 The 50% of specialist services provided in the remainder of a medical facility are outside a PCT's remit. They should therefore be funded from other sources (which in practice are likely to be from developer contributions).

14.40 It should be noted that this approach has not been agreed with the PCTs. Further work will be required.

Table 14.2 Understanding how much PCT funding is potentially available for primary care infrastructure

Facility	Cost of facility (mid-point)	% of activity unrelated to GPs (thus developers liable for cap costs)	£ developer liability	GP capital costs (notional, as rented)	Developers assumed to pick up 7.5% of PCT cap costs to account for time lag over 3 years	Anticipated PCT funding is the remainder
Scarborough North - 2GP surgery	£420,000	50%	£210,000	£210,000	£47,250	£162,750
Scarborough North - satellite service	£50,000	50%	£25,000	£25,000	£5,625	£19,375
South Scarborough - Middle Deepdale - 2GP surgery	£462,000	50%	£231,000	£231,000	£51,975	£179,025
South Scarborough - South Cayton - 3GP surgery	£648,000	50%	£324,000	£324,000	£72,900	£251,100
Filey/Hunmanby - improvement of existing facilities	£150,000	n/a - PCT funding assumed	n/a - PCT funding assumed	n/a - PCT funding assumed	n/a	£150,000

Source: RTP

We have assumed that S106 funding is available from the Middle Deepdale development

14.41 The S106 agreement for the Middle Deepdale development is not signed at the time of writing. However, it appears sensible to assume that it will be signed in the near future. In line with the emerging Section 106 agreement, we have assumed that S106 funding will be available for health provision in the Middle Deepdale/ South Scarborough area[25]. We have assumed that £250k will be available for health provision from the Middle Deepdale S106 agreement though this will likely be in the latter phases of development. This will be in addition to the PCT funding which has been calculated in the table above. Precise details of the resulting scheme have yet to be worked up.

What are the priorities?

14.42 We have rated all health services as representing 'essential' needs.

Infrastructure timing assumptions

14.43 We have assumed that the health infrastructure will be needed over the same build out period as the housing development.

Issues

There is scope for significant efficiency savings from multi-user buildings

14.44 Significant cost efficiencies are potentially available through the PCT. A community-hub style shared service facility could include a medical centre, a library and a community centre, for example. This type of co-operation needs to be actively encouraged by the Borough Council.

A CIL-type standard charge will be useful to allow PCTs maximum flexibility for rational planning of health services and to maximise total developer contribution

14.45 Increasingly PCTs are being asked to demonstrate how the money they receive in developer contribution is being used, and to explain the precise relationship of the projects funded by the developer contributions to the housing development in question. We expect that this newly critical approach from developers reflects reduced margins in the development market.

14.46 This change in approach from developers mirrors the changes in regulations guiding the use of S106 contributions, as provided by the CIL Regulations. Now the tests of a planning contribution are in law which means that PCTs have less flexibility to use available funding. This could result in the development of health centres in places that are sub-optimal from the point of view of the delivery of health services; obviously, health service need cannot be relied on to coincide with development sites.

[25] Telephone conversation with S106 officer on 16th November 2011

14.47 However, if a CIL charge (rather than a S106 system) is in place, there will be no requirement to demonstrate 'necessity to planning'. This would be the preferable outcome: it would mean that PCTs had maximum flexibility in service provision, but would also maximise the total funds available to the health service, as value from all development would be captured.

There is a need to make best use of existing capacity

14.48 Overall, PCTs believe that there is a need to make use of existing capacity in order to use resources efficiently. The emerging Estates Strategy will be an important element in this and it is vital that this ensures the efficient use of existing premises and land.

15 TRANSPORT

Introduction

15.1 In this section we examine the transport infrastructure required to support planned jobs and housing growth. We then look at the potential cost of that infrastructure, how that infrastructure might be funded, and when it is required. We then pick up issues that need to be addressed.

15.2 This work is based on reviewing reports on transport issues in the area and interviews held with the Highways Agency and County Highways officers. The key documents are:

- the Regional Network Report (2008) produced by the Highways Agency
- the Route Utilisation Strategy for Yorkshire and Humber produced by Network Rail (2009)
- the Local Transport Plan(s) for 2006-2011 and 2011-2016 produced by North Yorkshire County Council (the highway authority for the Borough).
- a report on a transport model of the highway network in Scarborough and forecasts of future conditions on the network by the Jacobs consultancy for the Borough Council
- a report on the cost of possible improvements to the highway network at congestion hot-spots produced by Peter Brett Associates

15.3 We begin by examining the context for transport infrastructure in the Scarborough and exploring the capacity of each transport mode to deal with the increased demand associated with growth.

Context

15.4 The main mode of transport used in Scarborough and Whitby is predominantly by car. The journey to work census data for 2001 showed that for those people living and working in the borough, 63% used car, 7% used buses and 28% used walk or cycle. For people travelling into the borough from outside to work, 90% used car and only 4% use public transport. For people living in the borough and travelling outside it to work, 84% use the car and 8% use public transport. This suggests a high level of reliance on the private car to meet the area's transport needs and consequential pressure on the road network both to and from and within Scarborough.

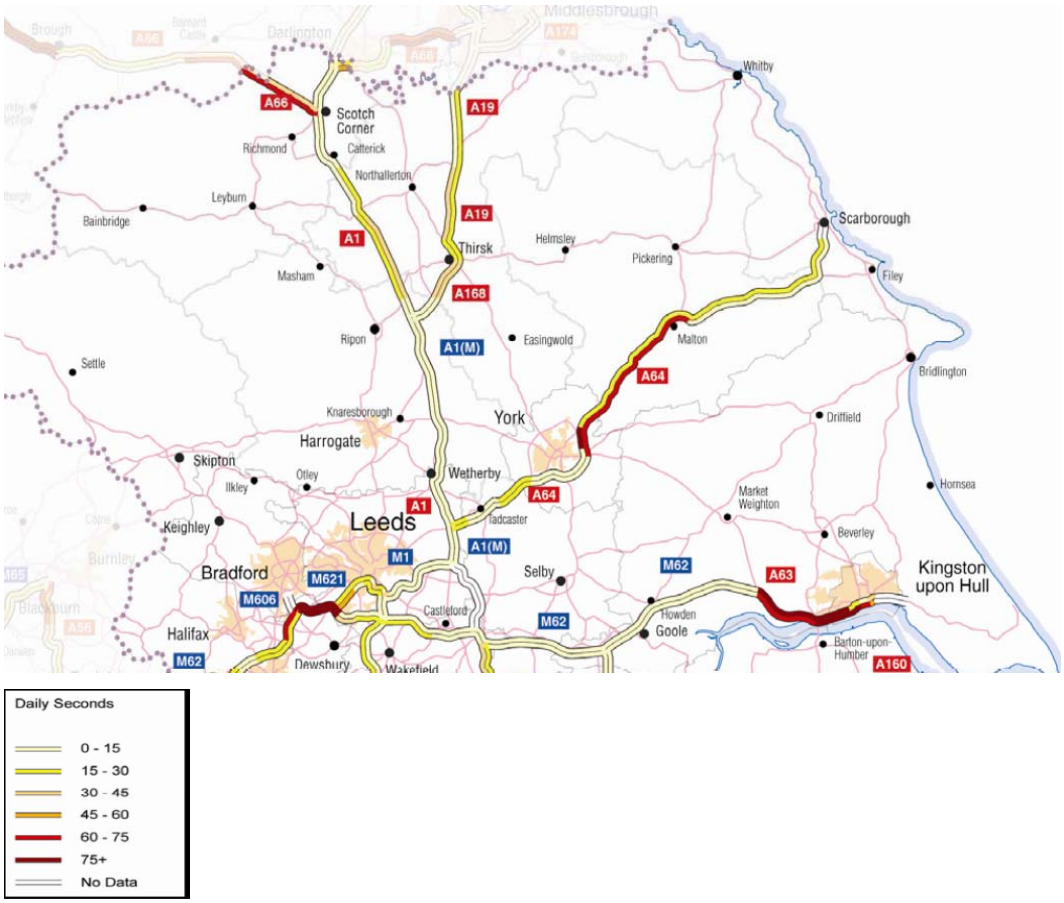
Highways

There are existing road infrastructure "pinch points" both in the local area and the broader North Yorkshire area

15.5 The main highway route into the borough is the A64 which runs east/west from York. Access from Whitby in the north is on the A171 and from Hull in the south along A165. The Highways Agency has reviewed conditions on the strategic highway network. The figure below shows the areas of highest delay on the network in 2006. Although outside the immediate Scarborough area, the link westbound on the A64 between Malton and York is

identified as a stretch of road under particular pressure. In the longer term there is an aspiration to make the route more efficient and subsequently to upgrade the A64 and increase capacity but there are no prospects of an upgrade in the short to medium term.

Figure 15.1 Observed total delay per vehicle, 2006



Source: Highways Agency, Regional Network Report for Yorkshire and Humberside, 2008

15.6 There are also some areas of pressure at certain times in the local highway network. These are particularly associated with the A64 between Musham Bank roundabout and Dunslow Road roundabout and at a number of key junctions within the town.

Rail

The railway network is able to accommodate predicted future growth in Scarborough, although some overcrowding may occur on peak hour services. We do not investigate rail further in this report

15.7 Scarborough is the terminus of the Trans-Pennine rail route and the Yorkshire coastal line. There is an hourly service on the Trans-Pennine route which starts in Liverpool and calls at the major stations of Warrington, Manchester, Huddersfield, Leeds and York. More locally these trains serve Malton, Seamer and Scarborough.

15.8 There is a train every two hours on the Yorkshire coastal line which runs south from Scarborough calling at locally at Seamer, Filey and Hunmanby and then running on to Bridlington, Beverly and Hull. Network Rail has examined the possibility of increasing the frequency of the service on this line and concluded that it does not currently represent

value for money. The stretch of single line track between Seamer and Bridlington means that the greatest frequency that can be achieved is an hourly service. But at this frequency the additional revenue from the new passengers attracted to the railway by the additional trains is not sufficient to cover the cost of the extra rolling stock required and the train crew costs of running these services.

15.9 The rail infrastructure on the approach to Scarborough station was recently upgraded in 2010 with major signalling upgrades and simplification of the track layout.

15.10 The railway network is able to accommodate predicted future growth in Scarborough. However, the issue to monitor is the possibility of over-crowding on peak hour services between Scarborough, Malton and York. The level of patronage on this line will be affected by a number of external factors such as changes in the rail fares, fuel prices and housing growth along the route.

Buses

The bus network is able to accommodate future predicted growth in Scarborough. We do not investigate buses further in this report

15.11 There are a variety of operators of bus services in the borough and they can rapidly develop new routes or increase frequencies to meet the demands from growth, providing there is sufficient demand to make the provision of these additional services commercially viable. A general reduction in the level of rural bus subsidy means that rural areas may well suffer a reduction in their service level which will impact on the level of public transport provision for any new housing in rural areas.

- Bus stations. There is currently no bus station in the Town Centre of Scarborough. Instead reliance is made of on-street bus stops. Recent discussions have suggested that the Bus Operator is satisfied with the current arrangements but is looking toward improvements to these facilities as opposed to a new bespoke station. We do not investigate this bus station infrastructure further in this report.
- Park and Ride. There are two park and ride services from the south, Seamer Road on the A64 and the Filey Road on the A165.These are currently running with spare capacity at certain times and parts of the year. This may be exploited to accommodate indigenous growth. The Park and Ride is very much a part of the Scarborough Integrated Transport strategy and spare capacity now will create a buffer for predicted growth, especially aligned with on and off street car parking strategy in the inner core of the Town Centre and with possible re-development of some Town Centre off-street car parks in the future. This infrastructure is currently in place, and so has not been investigated further.

15.12 The performance for some local bus services was improved with the recent implementation of the Scarborough Integrated Transport scheme funded by the Department for Transport (DfT). This work included realigning part of the A165 in the south of Scarborough, the building of the two park and ride sites, complimentary bus priority measures on their routes into Scarborough and an expansion of the SCOOT urban traffic control system which improved the efficiency of the traffic signals system in the town, so reducing delay to bus

services having the necessary in-built technology and assisting those buses to keep to their scheduled arrival times.

Our approach

Our approach to historic deficit

15.13 We have explained in the introduction that our central objective is to understand the infrastructure requirements resulting from growth in housing and jobs. In theory, this means that we have to "tune out" changes in infrastructure requirements due to other factors – such as trend growth in transport demand, or historic deficits in infrastructure provision.

15.14 While our general approach has been to concentrate on the transport implications associated with growth only, historic deficits in transport should not be entirely "tuned out", as they can have a bearing on scheme requirements, deliverability, timing and priorities. Where such 'historic deficit' exists then additional growth may

- mean that planning permission will not be granted, or to a lesser degree reduce the attractiveness of the development.
- mean that infrastructure upgrades may have to happen sooner than they otherwise might (for example, an improvement in road infrastructure might have to happen at the start of housing development, rather than at the end).

15.15 It is clear from existing work referred to above that there are some existing constraints in the highways transport network at certain times even before planned growth takes place.

15.16 We have therefore attempted to be mindful of existing congestion issues in the work undertaken.

What are the infrastructure requirements arising from growth? When are they needed? What are the costs?

Computer models have been used to estimate the increased transport demand created by growth

15.17 Through the County Council, Scarborough Borough Council has commissioned computer modelling to understand the impact of housing growth on the road network. This has been provided to us.

15.18 We have not had direct access to this model, but we have had access to the reports resulting from the transport modelling work. The reporting does not, prima facie, relate certain pieces of infrastructure to certain growth sites – so we cannot say from the model that certain pieces of infrastructure are directly required to cope with certain growth sites. Individual applications are likely to require more site-specific modelling utilising the base model.

15.19 The modelling shows that by 2026, cumulative growth (across all growth sites) will require the following additional road infrastructure.

Nine junctions in the area will need additional capacity

15.20 Various works will be required at a number of junctions within the Scarborough urban area as shown in below.

- Castle Road / North Marine Road
- Northstead Manor Drive / Burniston Road
- Scalby Road / Falsgrave Road
- Scalby Road / Manor Road
- Stepney Road / Stepney Drive
- Scalby Road / Stepney Drive priority
- Dunslow Road / A64
- Musham Bank
- Queen Margaret's Road / Seamer Road

There are capacity constraints on the A64. There are opportunities for two link roads

15.21 The critical issue for growth in Scarborough is the capacity constraints on the A64 between Musham Bank roundabout and Dunslow Road roundabout. It is not possible to build additional lanes here because of the geometric constraints of the area and proximity of the railway line. The capacity of the roundabouts can be increased to ease congestion at the junctions but ultimately this road limits the number of vehicles that can access Scarborough along the A64 corridor.

15.22 There are plans for two link roads between the A64 and A165. This will provide access to new housing development in the area. The first of these is the Middle Deepdale link road which will be provided by the developers of the new housing at Middle Deepdale giving the occupiers of the new housing a choice of routes out of the development. The trigger for the building of this link is the completion of 700 houses on the Middle Deepdale site. Residents from the development are likely to chose to travel on the A64 between Musham Bank roundabout and Dunslow Road roundabout if they are travelling from or to the south.

15.23 The second proposed link is associated with new housing at Cayton and will provide an access from the new housing onto the A165. It would also link with the existing road network and provide a route onto the A64 at the Dunslow Road roundabout.

When is infrastructure needed?

15.24 It is difficult to provide firm guidance about when infrastructure is required. This is for the following reasons.

- The Jacobs transport modelling work does not allow us to say exactly when transport infrastructure improvements are required during the plan period. No interim year modelling work has been reported.
- Interpolation of data in the Jacobs model is difficult, because there is no linear relationship between traffic volumes and delay at junctions (nor should there be).
- There are no local or national guidelines about what level of transport congestion is considered intolerable.

- There is uncertainty about the rate of background traffic growth. This is the case both in the Scarborough borough area, and nationally. The modelling work uses the DfT TEMPRO growth forecasts which have recently been reissued. The latest forecast for the background level of growth in traffic levels is lower than the previous estimates. In addition, when TEMPRO growth forecasts are used in a highway-only model, they are often found to be insufficiently sensitive to travel behaviour responses to fuel price rises, such as a reduction in the number of trips made and the changing of home and/or work location in order to reduce the length of car journeys.

15.25 Given the above uncertainties, we have had to use our professional judgement about when road infrastructure begins to represent a barrier to build-out of the individual growth sites.

15.26 The "traffic light" bar chart shown below introduces the concept of 'pain' on the transport network. The term has been used in relation to the potential burden that is likely to be imposed from development (in whole or part) on an already stressed network in the absence of enabling improvements. In these circumstances there is a high risk that the outcome would result in or compound an unmanageable situation.

15.27 The decision whether or not it is acceptable to allow such stress, and over what timescale, rests with the appropriate Highway governing bodies or other infrastructure provider. Key considerations would be political judgements and the implications for sustainable transport, the economy and the overall local environment. As a consequence the decision on what constitutes an acceptable level of network stress for individual developments lies outside the scope of this study.

15.28 It is important to note that when judging the 'Traffic Lights' for transport the rule of thumb we have used is:

- Red: the red bar shows when (in our view, and with the caveats offered above) there is insufficient transport capacity to properly cope with development. Of course, development of either jobs or housing is *possible* during this "red" period, but is likely to be associated with congestion which might be considered unacceptable. It is important to recognise that a designation of 'Red' should not be interpreted with the meaning that development must not go ahead, or would certainly have planning permission withheld on transport grounds.
- Amber: denotes where transport infrastructure appears to be sufficient to cope with planned growth, and so does not represent a barrier to development.
- Green: denotes where sufficient transport infrastructure is expected to be in place to cope with growth (all required schemes are complete).

15.29 The most significant transport barriers to growth are experienced in South Scarborough, with barriers being less significant at other sites (which are shown as amber and green). If each individual site is looked at in isolation, then additional congestion could be tolerated on these sites. However, this view of *individual* site impacts can fail to capture the *cumulative* impacts of growth on strategic transport infrastructure. The delivery of the growth aspirations for the borough is likely to require the junction improvements and link road mentioned above.

Table 15.1 Transport barriers to growth (assuming no transport investment)

YEAR	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 /26	Total
Scarborough - Scalby area																		
Transport																		
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																	
Scarborough Central & other north																		
Transport																		
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																	
South Scarborough																		
Transport																		
	The rough estimations available to us suggest that development would not be able to proceed on the sites in South Scarborough without significant improvement of the transport network (which may include an A64 to A165 link road and improvement A64 between and including Musham Bank and Dunslow Road roundabouts). Without improvements, further growth in this area would mean that the congestion which is currently considered broadly tolerable would exceed tolerable limits.																	
Whitby																		
Transport																		
	There are no major transport barriers to development in Whitby. Minor local adjustments may be required.																	
Filey and Hunmanby																		
Transport																		
	The rough estimations available to us suggest that development does not create transport capacity issues that would halt development. It is anticipated that the main access route to Scarborough would be along the A165.																	
Northern Villages																		
Transport																		
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																	
Western Villages																		
Transport																		
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. It is anticipated that the main access route to Scarborough would be along the A170. There would be likely to be some diffuse impact on the A64 pinch points.																	
Southern villages																		
Transport																		
	The rough estimations available to us suggest that development does not create transport capacity issues that would halt development. Access routes to central Scarborough will be either along the A165 or the A64, depending on development location. The choice of routes will help to alleviate pressure on A64 pinch points.																	
Scarborough South - Business Park Expansion																		
Transport																		
	Modelling work has shown that at some stage in the build out of the business park a left turn filter lane will be required on the Dunslow Road/A64 roundabout to accommodate traffic leaving the business park. New growth on sites which currently do not yet have planning permission on the business park will create high levels of congestion (which may be considered intolerable) without this filter lane being constructed. The filter lane would use land currently in the ownership of Scarborough Building Society. There is no certain position about when this filter lane will be required, because no interim years modelling has been carried out. There is also uncertainty around the rate of build-out for the business park sites without planning permission. For this exercise we have assumed that the filter lane improvements will represent a barrier to further development at the Business Park site by 2017 but this is subject to a significant margin of error related to a) the use of the roundabout by through traffic and b) the rate of build out of the business park.																	
Scarborough North - Business Park																		
Transport																		
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																	
Central Scarborough - retail																		
Transport																		
	There are no signficant transport barriers that obstruct the development of central retail provision. Some local improvements might be needed for any larger developments.																	

Source: PBA/RTP

Total costs have been obtained

15.30 Our work on costs has been assembled as follows.

- Junctions. Peter Brett Associates have prepared a high-level assessment of the costs of improving these junctions and providing the East/West Link Road. These are presented in the table below.
- Cayton link road. The new link road between the A64 and A165 serving the Cayton housing has not yet been designed so the route is uncertain. Two options for the route have been considered and initial cost estimates prepared on the basis of having to raise the road as well as being able to build at-grade. These cost estimates are shown in the table below. These costs exclude land costs and VAT. In order to provide a conservative estimate, we have assumed that the more expensive of the options will be chosen.

Table 15.2 Preliminary cost estimates for the A64 - A165 link road

	Option A North		Option B East	
	Construction	Project	Construction	Project
At Grade	£5.9million	£8.2million	£13million	£17.8million
Raised	£9million	£13million	£18.6million	£26.6million

- Middle Deepdale link road. We have used costs estimates provided to us by Scarborough Borough Council here.

15.31 The project costs quoted include an allowance for utilities, preliminaries, design, supervision and contingencies but exclude and land costs and VAT.

Table 15.3 Preliminary cost estimates for local junction improvements

Junction	2011 Type	Proposed Mitigation/Improvements Options	Project total cost (including range)(excl. land and VAT)	Project total cost taking central point in quoted range
Castle Road / North Marine Road	mini roundabout	Signal crossroads	£360,000	£360,000
Northstead Manor Drive / Burniston Road	priority T-junction	Signal T Junction	£360,000	£360,000
Scalby Road / Falsgrave Road	mini roundabout	Signal T junction	£390,000	£390,000
Scalby Road / Manor Road	mini roundabout	Signal T Junction	£310,000	£310,000
Stepney Road / Stepney Drive	Normal roundabout	Widen north and eastern links	£190,000	£190,000
Scalby Road / Stepney Drive priority	priority T-junction	Staged Signal T cross roads left turn filter	£782,000	£782,000
Dunslow Road / A64	normal roundabout	Left turn filter lane	£95,000	£95,000
Musham Bank	normal roundabout	Partial or full signalisation of Junction	£400,000 - £875,000	£638,000
Queen Margaret's Road / Seamer Road	signalised T-junction	Extension on right turn lane. See Note 1	£20,000	£20,000
Junctions total				**£3,145,000**
Cayton Link road (conservative view)		Link road	£26,600,000	£26,600,000
Middle Deepdale link road*		Link road	£9,000,000-£12,000,000	£11,000,000
Link roads total				**£37,600,000**
*central point adjusted to match proposed S106				
GRAND TOTAL				**£40,745,000**

Source: Peter Brett Associates/Scarborough Borough Council

Stripping out historic deficit costs to isolate a transport infrastructure cost generated by growth in Scarborough

We categorised schemes according to the extent they service existing problems

15.32 We need to estimate a cost for infrastructure to support growth (rather than a total cost of the transport infrastructure in Scarborough during the plan period). There is a difference between the two, because the need for transport infrastructure improvements cannot always be entirely ascribed to new growth.

15.33 We have identified the extent to which each transport improvement services historic transport deficit on the network through qualified judgements. We have recognised that historic deficit is significant and therefore we have discounted a proportion of the cost of each scheme according to the extent to which it services existing issues. We have used discount values of:

- 0% - in the instances where the scheme only services historic deficit, meaning that no cost can properly be ascribed to site growth;
- 25% - where the scheme is considered to primarily service historic deficit, with the balance servicing site growth;
- 50% - where the scheme services historic deficit at a medium level;
- 75% - where the scheme services historic deficit at a low level; and
- 100% - in the few instances where a scheme will cater almost entirely for one or more growth site.

15.34 After the cost of deficit is identified in this exercise above, the remaining costs are ascribed to housing and jobs growth.

15.35 These costs are shown in the table below.

15.36 No attempt has been made to weight scheme costs according to the extent to which they enable the different individual growth sites. This is because there is no robust evidence to support such an allocation.

Table 15.4 Transport costs which can be ascribed to growth

Junction	2011 Type	Proposed Mitigation/Improvements Options	Project total cost (including range)(excl. land and VAT)	Project total cost taking central point in quoted range	Proportion of costs ascribable to growth	Infrastructure cost ascribe to growth
Castle Road / North Marine Road	mini roundabout	Signal crossroads	£360,000	£360,000	50%	£180,000
Northstead Manor Drive / Burniston Road	priority T-junction	Signal T Junction	£360,000	£360,000	50%	£180,000
Scalby Road / Falsgrave Road	mini roundabout	Signal T junction	£390,000	£390,000	50%	£195,000
Scalby Road / Manor Road	mini roundabout	Signal T Junction	£310,000	£310,000	50%	£155,000
Stepney Road / Stepney Drive	Normal roundabout	Widen north and eastern links	£190,000	£190,000	50%	£95,000
Scalby Road / Stepney Drive priority	priority T-junction	Staged Signal T cross roads left turn filter	£782,000	£782,000	50%	£391,000
Dunslow Road / A64	normal roundabout	Left turn filter lane	£95,000	£95,000	100%	£95,000
Musham Bank	normal roundabout	Partial or full signalisation of Junction	£400,000 - £875,000	£638,000	100%	£638,000
Queen Margaret's Road / Seamer Road	signalised T-junction	Extension on right turn lane. See Note 1	£20,000	£20,000	50%	£10,000
Junctions total				**£3,145,000**		**£1,939,000**
Cayton Link road (conservative view)		Link road	£26,600,000	£26,600,000	100%	£26,600,000
Middle Deepdale link road*		Link road	£9,000,000-£12,000,000	£11,000,000	100%	£11,000,000
Link roads total				**£37,600,000**	100%	£37,600,000
*central point adjusted to match proposed S106						
GRAND TOTAL				**£40,745,000**		**£39,539,000**

How can new infrastructure be funded?

There are no significant funding streams available

15.37 Given this situation, it seems to us sensible to assume that there is no pot of money currently available for transport improvements created by growth.

15.38 There are currently no funding streams available from the DfT to fund large transport projects. In December 2010 the Department announced that it was introducing a radical simplification of local transport funding, moving from 26 separate grant streams to just four. These are as follows.

- a local sustainable transport fund (capital and resource);
- major schemes (capital)
- block funding for highways maintenance (capital); and
- block funding for small transport improvement schemes (capital).

15.39 All other specific grants are being ended, with the funding transferred and included in the main Local Government Formula Grant administered by the Department for Communities and Local Government'.

15.40 However the local sustainable transport fund and major schemes are now closed to all new applications which leaves block funding as the sole source of funding for transport from central government for local authorities. It is unlikely that any new funding streams will become available in the lifetime of this government. There is an indication that the major scheme funding will be re-opened, albeit under a different name and with different processes, in the next Comprehensive Spending Review period.

Funding allocated to North Yorkshire will be focused on highways maintenance

15.41 The amount of funding that each local authority receives for highways maintenance and small transport improvement schemes is determined by a fixed formula and this is not responsive to the actual number and cost of schemes the local authority wishes or feels it is necessary to deliver. Also the funding is not received directly by Scarborough but rather is allocated to North Yorkshire as whole. North Yorkshire is due to receive around £4m funding for small transport improvements in each of the remaining years of this current comprehensive spending review period, but none of this is ring-fenced to Scarborough, and North Yorkshire has stated that its intention is to concentrate on the maintenance and management of existing infrastructure.

15.42 It is possible that the small transport improvement schemes funding could contribute towards the cost of local junction improvements in Scarborough but there will be many competing demands on these limited funds throughout the County and the expenditure may well have to be diverted towards maintenance of the existing highways, particularly if the recent trend towards severe winters continues.

Developer contributions under Section 106/278

15.43 For the link road/bridge required to deliver the proposed allocation at Middle Deepdale, it is expected that this will be delivered through a S106 mechanism. The link road will be built to

access the development as it proceeds. In respect of the bridge, it is expected that the mechanism will ensure that, as phases are built, money is collected into a central pot to cover construction at the appropriate time.

15.44 It is considered that approximately 700 dwellings can be built before the bridge is required, although this would require confirmation by North Yorkshire County Council Highways Department and the Highways Agency. Given assumed rates of build out, it is therefore expected to be needed in 2018. The cost of the link road and bridge is around £11m, with the bridge costing approximately £3m. [26]

A funding gap remains

15.45 The table below sets estimated costs of required transport infrastructure against the available sources of funding. It shows that there is a considerable funding gap for transport infrastructure.

Table 15.5 Assessed funding gap for transport needs

	Gross cost	Funding from S106	Funding gap
Castle Road / North Marine Road	£360,000		£360,000
Northstead Manor Drive / Burniston Road	£360,000		£360,000
Scalby Road / Falsgrave Road	£390,000		£390,000
Scalby Road / Manor Road	£310,000		£310,000
Stepney Road / Stepney Drive	£190,000		£190,000
Scalby Road / Stepney Drive priority	£782,000		£782,000
Dunslow Road / A64	£95,000		£95,000
Musham Bank	£638,000		£638,000
Queen Margaret's Road / Seamer Road	£20,000		£20,000
Middle Deepdale link road and bridge	£11,000,000	£11,000,000	£0
Link road (conservative view)	£26,600,000		£26,600,000
Total	**£40,745,000**	**£11,000,000**	**£29,745,000**

15.46 This shows a substantial funding gap of nearly £30m for transport needs.

Issues and barriers to growth

Outturn travel demand is subject to a number of uncertainties

15.47 The rate at which traffic growth associated with existing development in the Scarborough area makes use of the existing limited spare capacity on the A64 and the junctions in the town centre depends on a number of factors. These include

- the level of economic growth in the area (which affects the level of car ownership and the number of peak hour trips to employment);
- the cost of fuel (which acts as a deterrent to car use); and

[26] Source: email exchange with SBC 14/10/11

- effectiveness of campaigns to encourage the use of sustainable travel modes.

Initiatives to reduce demand for transport infrastructure

15.48 An attempt could be made to reduce the number of car trips associated with new development by managing the demand for travel. This would be incorporated in residential and workplace travel plans and Town Centre Strategies. For major sites the developers could be required to introduce and maintain (utilising Travel Plan Coordinators) such plans as part of their planning consent. The Council may also wish to co-ordinate and implement area wide transport plans, linking in public transport operators.

15.49 The developers of particular sites would be required to fund travel plans and subsidise bus services. The funding for this work would come from Section 106 agreements.

15.50 An attempt could also be made to improve public transport and walk/cycle facilities so as to promote the choice of non-car modes of transport on a wider scale throughout the borough. This could include the provision of a further park and ride site to the north of Scarborough and two sites for Whitby.

Timing assumptions

15.51 For the schemes related to needs in Scarborough town centre – created by most of the growth proposals within the immediate hinterland of the town – it is very difficult to be precise as to when each scheme will needed. This depends on the levels of congestion caused by additional traffic using the town centre, which partially involves a judgement as to when such congestion is nearing unacceptable levels. For the purpose of assessing when infrastructure costs will be incurred, such needs are spread evenly across the whole plan period. In reality, none of the costs will individually be spread across such a long time period. However, in aggregate, this represents a reasonable assumption in terms of overall costs per annum.

16 ELECTRICITY

Introduction

16.1 This section deals with electricity infrastructure requirements in the Scarborough Borough Council area.

How is the system structured?

16.2 The electricity industry in Great Britain comprises generation, transmission, distribution, metering and supply companies. The electricity distribution networks carry electricity from the transmission systems (owned and operated by National Grid) and some generators that are connected to the distribution networks to industrial, commercial and domestic users.

A regulated market is in place

16.3 The electricity market (along with the gas market), including the activities of Distribution Network Operators (DNOs) and Independent licensed Distribution Network Operators (iDNOs), is regulated by the Gas and Electricity Markets Authority, which governs and acts through the Office of Gas and Electricity Markets (Ofgem).

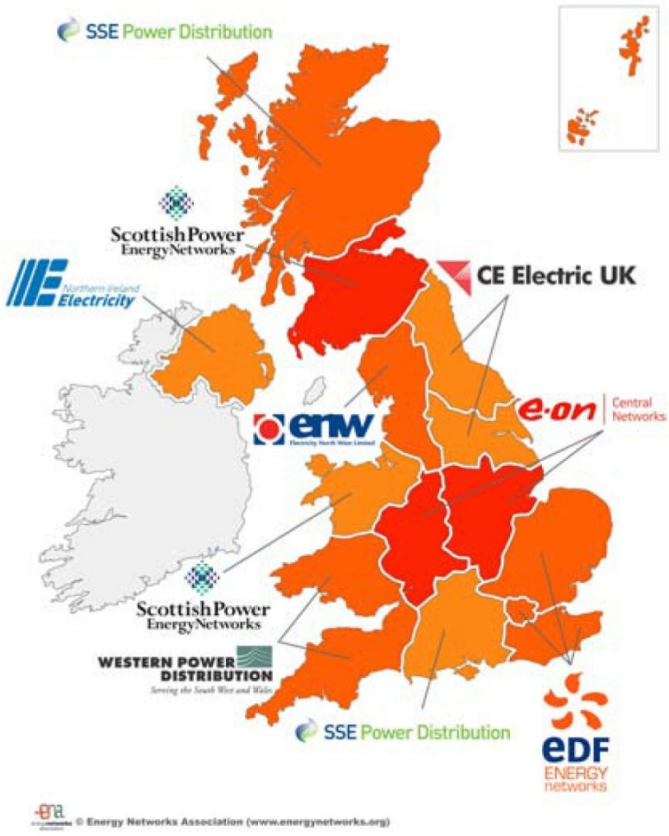
16.4 As the gas and electricity industries' regulatory body, Ofgem's primary duty is to protect the interests of consumers, where possible by promoting competition. As an independent economic regulator, it acts without interference from Government, and is answerable to the Public Accounts Committee (PAC) of the House of Commons. Its powers are derived from the Gas Act 1986 and the Electricity Act 1989, as amended. It also has enforcement powers under the Competition Act 1998.

16.5 Ofgem specifically regulates those parts of the electricity and gas markets that either cannot be opened up to competition, or where competition is not yet established, such as gas and electricity transmission systems and electricity distribution networks. Ofgem sets price controls to protect consumers from unfair pricing by these monopolies.

Distribution network operators form a natural monopoly

16.6 The majority of electricity distribution services are provided by Distribution Network Operators (DNOs) who operate within a designated area, based on the former regional electricity board (REB) areas at the time of privatisation. There are fourteen licensed distribution network operators (DNOs), owned by seven different companies (see map below). Each DNO is separately licensed with responsibility for a designated distribution service area. Each of these DNO areas forms a natural monopoly since there is only one operator for each area.

Figure 16.1 Distribution network operators



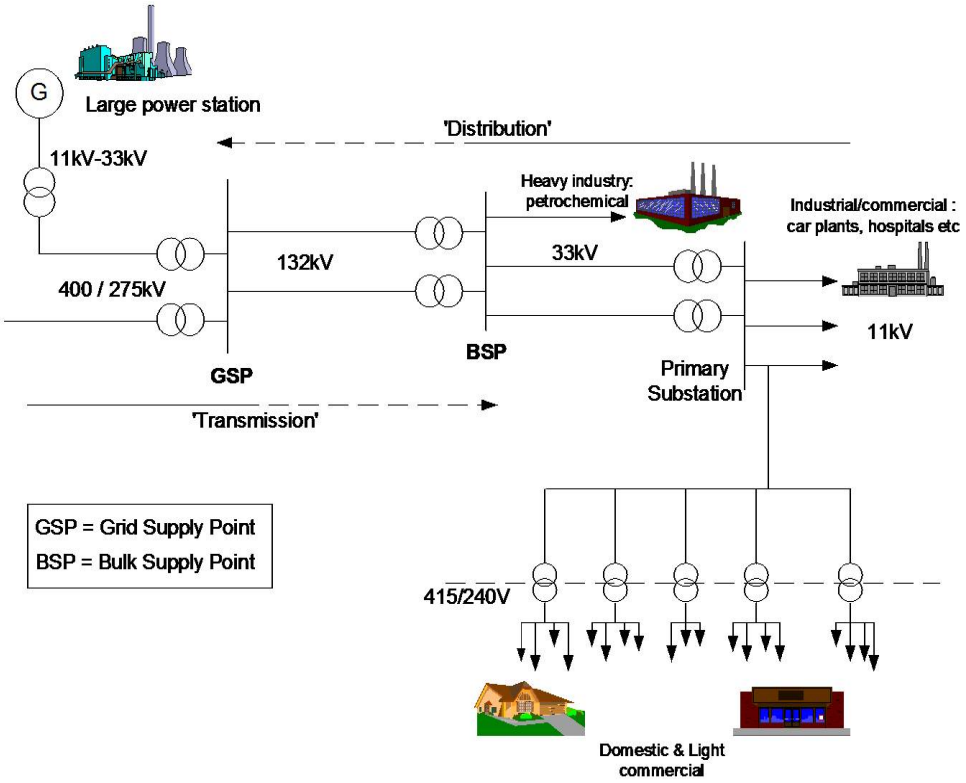
Four independent operators run smaller networks

16.7 In 2005 Ofgem introduced competition in distribution. Companies can apply to the regulator to become Independent licensed Distribution Network Operators (iDNOs). These iDNOs provide an alternative to the incumbent distribution network operator for the adoption of new network assets.

16.8 There are also four independent network operators who own and run smaller networks embedded in the DNO networks. These are known as independent distribution network operators (IDNOs). These companies provide an alternative choice to the traditional method of network provision and ownership. Additionally, there are a number of independent connection providers (ICPs) who can install extensions from existing DNO owned networks to provide new connections to end users. IDNOs and ICPs provide choice and competition in the network and connection market.

16.9 The figure below provides a simple diagrammatic illustration of the transmission and distribution system for electricity in the UK.

Figure 16.2 The electricity transmission and distribution system



16.10 In summary electricity enters a DNO's network via interfaces with the electricity transmission network, operated by National Grid, known as Grid Supply Points (GSP's). It is then distributed to end users via 132kV, 33kV, 11kV (in the some cases, 6.6kV) and low voltage networks, via 33kV to 11kV (or 6.6kV) substations known as primary substations and at low voltage via 11kV (or 6.6kV)/ LV substations known as secondary distribution substations. In rural networks it is still common to find pole mounted transformers providing low voltage supplies to rural communities, farms, etc.

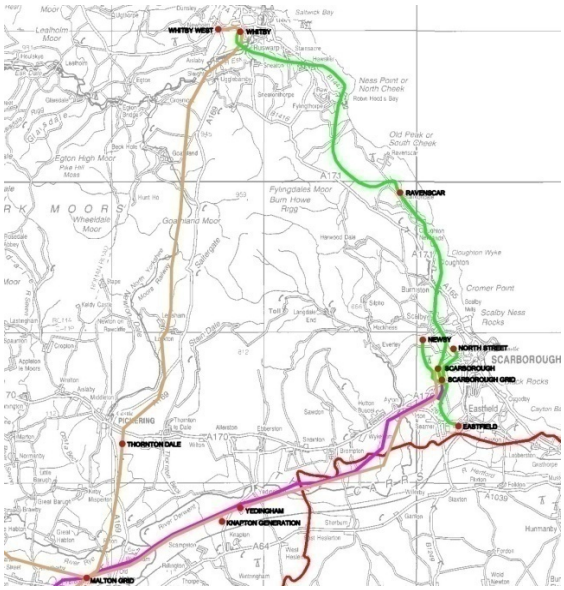
Scarborough Borough Council lies within the two licence areas (YEDL and NEDL)

16.11 The geographic area covered by Scarborough Borough Council lies within the two electricity Distribution Network Operator (DNO) licence areas (YEDL27 and NEDL) operated by CE-Electric. The boundary between the two licence areas is shown in the following figure. NEDL operates to the north of the boundary and YEDL to the south.

[27] YEDL – Yorkshire Electricity Distribution Limited / NEDL – North East Distribution Limited

16.12 The NEDL network is supplied from the Malton Grid substation from which a 132kV power line supplies the Scarborough Grid 132kV/33kV substation located within Scarborough. 33kV lines emanate from this substation to feed primary substations as shown in the following figure. In addition 66kV circuits connect Malton Grid to Whitby and Scarborough. These act as standby sources to improve network security.

Figure 16.4 The NEDL transmission lines



Key: Pink – 132kV, Brown – 66kV, Green – 33kV

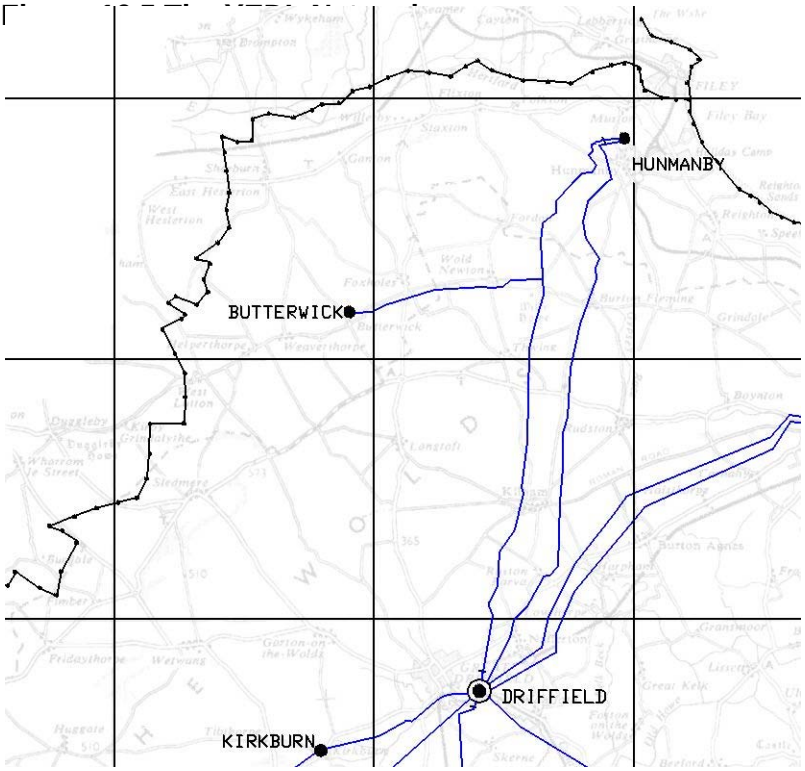
16.13 We have mapped which areas are supplied by each substation. These maps are attached at Appendix 6.

16.14 NEDL has published the following data relating to these substations. The table indicates all substations except Eastfield have reasonable spare capacity available.

Table 16.1 Maximum loads and forecast loads (NEDL)

Substation	Maximum Load for 2008/09	Forecast Load Information					Firm Capacity
		2009/10	2010/11	2011/12	2012/13	2013/14	
	MVA	MVA	MVA	MVA	MVA	MVA	MVA
Scarborough 132kV	87.80	89.11	90.45	91.81	93.19	94.59	100.00
Eastfield	29.13	29.42	29.71	30.01	30.31	30.61	32.00
Newby	14.12	14.40	14.69	14.98	15.28	15.59	24.00
North Street	18.00	18.36	18.73	19.10	19.48	19.87	24.00
Scarborough 33/11	21.00	21.42	21.85	22.29	22.73	23.19	32.00
Whitby T1	5.25	5.28	5.30	5.33	5.36	5.38	12.00
Whitby West T1	5.50	5.53	5.56	5.58	5.61	5.64	12.00

16.15 The YEDL Network is supplied from the Driffield 132kV/66kV grid substation. 66kV power lines emanate from Driffield to supply primary substations at Hunmanby and Butterick.



16.16 The areas supplied by each YEDL primary substation are show in Appendix 6.

16.17 YEDL has published the following data relating to its substations. The table indicates all substations except Butterwick have reasonable spare capacity available.

Table 16.2 Maximum loads and forecast loads (YEDL)

Substation	Maximum Load for 2008/09	Forecast Load Information					Firm Capacity
		2009/10	2010/11	2011/12	2012/13	2013/14	
	MVA	MVA	MVA	MVA	MVA	MVA	MVA
Driffield 132kV	117.35	118.64	112.84	113.40	113.97	114.54	147.00
Hunmanby	8.39	8.43	8.47	8.52	8.56	8.60	24.00
Butterwick	5.19	5.21	5.24	5.27	5.29	5.32	6.50

Each distribution network operator has to meet minimum supply security standards

16.18 To comply with their electricity distribution licence each DNO is required to plan and develop their distribution network to meet the requirements of Engineering Recommendation (ER) P2/6. This recommendation defines the network security standards to which each DNO has to comply with but does not dictate the ways in which to deliver what are known as 'security standards' i.e. the time taken to restore supplies following an

outage which is dependent on the design and redundancy built into the electricity network. A key point to note is that to meet the requirements of ER P2/6 the electricity networks are designed to cater for the peak network load which is predicted to occur during average cold spell conditions: however due to the increased use of air conditioning in the past 10 years, peak network loads are increasingly occurring during the summer months rather than the winter.

The pricing and investment planning process in the electricity industry

16.19 Ofgem implement price controls on DNOs. Their principal objective is to protect the interests of existing and future customers through:-

- promoting competition, wherever appropriate; and
- regulating monopoly businesses (such as DNOs) that operate electricity distribution networks

16.20 Price controls are set to allow network operators (DNOs), through efficient operation, to earn a fair return after capital and operating costs whilst limiting the costs that can be passed onto customers through its charges.

16.21 Price controls are generally set for 5-year periods. The current pricing control period runs from 1 April 2010 to 31 March 2015. Ofgem monitors compliance with the price control conditions and can take enforcement action if price control or licence requirements are breached.

Infrastructure expenditure is managed via Ofgem. Rates of return on investment are regulated

16.22 For a DNO capital expenditure ("CAPEX") covers the amount it spends on its assets such as in replacing or providing new overhead lines, underground cables, switchgear and transformers. For Price Control purposes this covers its future capital requirements based upon projections of future growth and the condition of its present assets. Ofgem then review these projections and allow a level of capital expenditure based on what an efficient company would incur over the next price control period.

16.23 Companies earn a regulated rate of return on its capital expenditure (typically over a 40 year period) from current and future customers by way of income derived through its ongoing distribution use of system ("DUoS") charges. The capital expenditure allowance in the Price Control also includes load-related new connections and reinforcement and non-load, non-fault, new and replacement assets and a proportion of other direct and indirect activity costs - all of which are net of customer contributions/connection charges. In this way the Price Control system effectively not only determines prices, but also dictates the investment that a DNO can make during that 5-year pricing control period.

Deviating from the agreed investment plan is difficult

16.24 DNOs cannot deviate from the agreed investment plan for each 5-year pricing control period without making a robust business case to Ofgem, and providing clear evidence of 'certainty' that the anticipated development and associated additional electricity usage will happen. This is to ensure that DNOs do not wastefully invest in infrastructure that

ultimately is not used, and for which customers may have effectively been 'charged' for through adjusted prices. There are however two key disadvantages of this system:-

1 DNOs are relatively restricted in their ability to respond to new initiatives or sudden changes impacting upon their network during the 5-year Price Control period.

2 A major driver of connection charges is the existing capacity available in the local network, plus other technical aspects concerning security of supply and other technical criteria. A DNO's capital expenditure on work to meet load variations - including additional load from both existing and new customers - has a major impact on a network's ability to accommodate additional load. Since load from new customers require new connections there is a temptation for this to be used to collect income towards uprating networks that might otherwise need be funded by the DNO.

Electricity costs associated with development

16.25 In accordance with Section 22 of the Electricity Act special terms are applied by DNOs for infrastructure-only developments (ie no buildings are initially built only road infrastructure is undertaken) where an extension or reinforcement of the distribution system is required in advance of actual connections to individual premises. Speculative developments (where a building is built speculatively with no known occupier e.g. office building) are treated similarly to infrastructure-only developments, but in these cases final connections to individual premises are requested even though uncertainty about occupancy exists.

16.26 In both these cases, the developer will be expected to enter into a contractual arrangement with the DNO covering the works to be undertaken (i.e. infrastructure and/or works on the development site). The full cost of this is charged in full in advance of the works being carried out, with any contribution to reinforcement being based on the capacity requested by the developer for the development and the point of connection to the existing distribution system as detailed above. In addition DNOs do not:

- refund connection charges if anticipated load for a development fails to materialise;
- and allow system capacity to be reserved for more than five years (as after this time any untaken capacity will be available for use elsewhere if required). It should be noted that the DNOs do not have an obligation to reserve capacity for infrastructure only schemes, any agreement will be based on a site specific negotiation with the DNO.

Competition in connections in the UK

16.27 With the introduction of competition in connections there are now three routes to obtaining an electricity connection:-

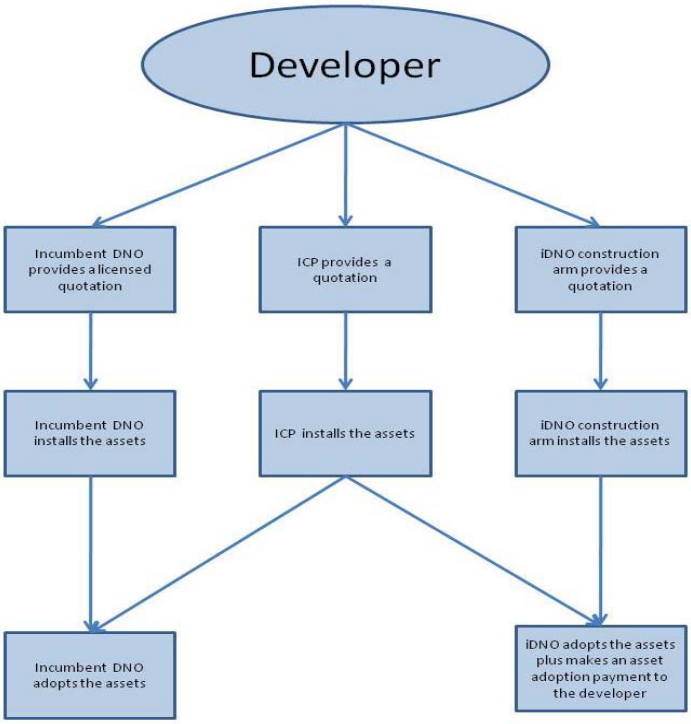
- the traditional approach of obtaining a quotation (often referred to as a 'Section 16 quotation') directly from **the incumbent DNO**. In this case the developer pays the whole cost of the new connection and any associated reinforcement upfront, with the assets then being handed over to the to the incumbent DNO free of charge;
- through an **Independent Distribution Network Operator (iDNO).** This arrangement allows the developer who paid for the connections to be reimbursed a sum for the transfer of the assets to the iDNO to recognise the value of the connection assets and their revenue earning potential (the current regulatory arrangements for DNOs do not

allow them to make such payments for taking over competitively-provided network assets).

- through an **Independent Connection Provider (ICP)**, approved as an accredited contractor through the Lloyds NERS scheme for the provision of all contestable works up to the new point of connection(s). Once completed the ICP arranges for the installed assets to be adopted by the incumbent DNO or an iDNO.

16.28 The following flowchart sets out the process in steps.

Figure 16.6 Developers' choices when connecting to the main supply



Source: UCE

There are risks of abortive work being carried out

16.29 It is important for the Council, developers and other stakeholders involved in delivering electricity infrastructure to note that a) is it vital to ensure that forecast load requirements are as accurate as possible to reduce the upfront costs, and b) significant abortive costs can be incurred if a development does not go ahead in either the timescales envisaged or to the scale envisaged.

16.30 DNOs report that forecast loads from developers are almost always in excess of the actual load that is eventually taken up on a development. In addition there have been several incidences of abortive costs being incurred on capacity that has been reserved but not taken up within the allowed 5-year reservation window.

Charges for reinforcement of the existing distribution system

16.31 Where reinforcement is required DNOs can charge a contribution towards the costs of this work, based on the following simple formula:-

$$\text{Connection Charge Contribution} = \text{Reinforcement Cost} \times \left(\text{Required Capacity} + \text{New Network Capacity}\right)$$

16.32 Reinforcement charges only cover work up to one voltage level above the voltage at the point of connection (PoC) of the new extension to the existing distribution system (known widely as 'the Voltage Rule').

The accuracy of determining of the PoCs should be checked and verified

16.33 It is important for the Council, developers and other key stakeholders when considering an investment towards infrastructure costs that the accuracy of determining PoCs is checked and verified, as costs can significantly increase dependent upon voltage point at which they are required - generally the higher the voltage level, the greater the costs.

DNOs operate on a 'first developer pays' principle

16.34 DNOs operate on a 'first developer pays' principle. The is because under the terms of their DNO licences they are not allowed to speculatively invest in infrastructure which is not already within their 5-year investment plan, and they therefore have to recover the full cost of all of the new or improved infrastructure created. This can lead to circumstances where a developer on a major scheme who only has an interest in part of the site may be asked to pay for the full costs of delivering the infrastructure that will service the entire site, despite only having an interest in part of it.

Connections must be provided on request. Charging levels are set by Ofgem

16.35 All electricity DNOs have a statutory duty under the Electricity Act 1989 to provide connections (i.e. extensions from its distribution system) upon request from persons seeking connections (note that connections are not included in the five year plan).. DNOs are entitled to recover the reasonable costs of providing a connection, including any necessary enhancement or reinforcement to its distribution system by way of a connection charge, which is payable in advance of any works being carried out. It is not intended that DNOs generate any profit from connections, nor that they attain network betterment over-and-above that requested by the customer.

16.36 Under the terms of their licences electricity DNOs must produce and implement charging methodologies for connection to their distribution systems, clearly setting out on what basis costs will be calculated. These methodologies have to be pre-approved by Ofgem. It is important to note that DNOs are also obliged to publish these charging statements so that all potential customers can check the basis of any cost estimates provided to them: CE-Electric publishs this information on their website so that it is easily and readily accessible.

Recent changes to accommodate local generation have increased connection costs

16.37 Aside from the introduction of competition in connections from 1995, one of the key challenges facing the electricity distribution industry is the connection of renewable and other generation plant to networks which have traditionally carried electricity from large power stations in one direction only (ie. from the highest to the lowest voltage levels): the introduction of embedded generation onto these networks has meant that in many cases larger-sized equipment needs to be installed at the expense of the generator.

16.38 In April 2005 Ofgem instigated changes to connection charging arrangements for all DNOs in order to simplify them and make them more transparent (further amendments have been introduced subsequently).28

16.39 These changes have had a dramatic effect on some types of developments, particularly those with high load requirements. For large developments the changed voltage rule has had the greatest impact: for example if the DNO deem the point of connection (PoC) to the distribution system being at 11 kV (the lowest level of HV supply) the cost of necessary work is based on the costs associated with next highest voltage level (33kV), which are inevitably more expensive. In practice this means that developments with similar characteristics and network requirements face much higher costs after April 2005 than they did before.

16.40 Some changes have caused concern amongst both DNOs and end-consumers - DNOs feeling that this system is unfair as they are being asked to support a higher proportion of upfront investment costs; and end-consumers feeling that in reality they are being asked to pay a greater proportion of network asset investment costs upfront via connection charges.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

The business park has sufficient electricity infrastructure

16.41 Following a £1m investment by Scarborough Council and Caddick Developments in 2009, a new 11kV circuit with 10MVA of capacity was installed from Scarborough Primary substation to the Business Park and ten new 1MVA substations installed within the business park to cater for the future anticipated growth. It is assumed NEDL have reserved the new capacity free of charge for up to 5 years, reservation beyond this date would require the payment of a capacity reservation charge.

There is likely to be a need for a primary sub-station and network reinforcement in South Scarborough

16.42 The potential additional growth within the South Scarborough area could trigger the need for a new primary substation due to the demand on the Eastfield Primary Substation. It is likely additional reinforcement of, or extensions to, the local 11kV distribution networks would be required. The most likely position of the new primary substation would be on the Scarborough South Business Park within area 12 on the map. Based on the existing new connection charging methodologies, NEDL would also charge for any costs towards the reinforcement of the 132kV and 33kV networks to allow the new primary substation to be

[28] The major changes included a) changes to the charging methodology to be used by DNOs for connections to their distribution systems; b) removal of Tariff Support Allowance (TSA), which were previously used by DNOs to offset the cost of installing new (load) connections to their distribution systems, and were equivalent to the sum of money recovered in the DNO's on-going distribution use of system (DUoS) charges for those assets; and c) a redefined voltage rule, meaning that rather than using the voltage of the metered supply (LV), as previously, DNOs could base rechargeable costs to developers on the voltage of the point at which the new extension to the development is connected to the DNO's distribution system.

installed. An estimated cost of a new primary substation would be £3m excluding any reinforcement or extensive 33kV cabling works.

Other areas may require some network reinforcement

16.43 The projected growth in the other areas will not trigger the need for new primary substations based on the information obtained. However it is not possible to determine whether reinforcement of 11kV distribution networks / substations would be required to support the projected growth at local level. Developers will have to undertake specific studies of any reinforcement when their plans and phasing are more specific; developers would have to contribute to any reinforcement, and can be expected to take this into account in their calculations of site value.

How can new infrastructure be funded?

Funding will be private – either through developer or through adoption by an iDNO

16.44 Depending on how the new capacity is requested the cost of network reinforcement will either be apportioned or charged in full by NEDL to the first applicant, based on their current connection charging methodology.

16.45 Alternatively should a sufficient business case exist a contribution in part or in full towards the cost of the new electricity infrastructure to serve each of the development areas (including primary substations) could be obtained from the new assets being adopted by an iDNO rather than NEDL / YEDL.

Are the upgrades deliverable?

16.46 The scale of the investment required is unlikely to materially affect the viability of any scheme. Should reinforcement be required, sufficient time should be allowed in order to ensure capacity is in place in sufficient time to supply the new developments. Please rewrite more clearly.

What are the priorities?

16.47 These infrastructure costs are generally picked up by the private sector. They do no represent a priority for public sector investment. Prioritisation is therefore marked as “not applicable” in the spreadsheet model.

Issues and timing assumptions

16.48 The issues we see here are as follows:

- need for liaison and forward planning. The construction of substations involves long term planning, the purchasing of long lead time equipment and the reservation of sites for the substations (although there is a proposed site at the Business Park). It has been assumed that all wayleaves and legal requirements for the substation sites and cabling works will be forthcoming. Any delay in this process could significantly affect construction works and cause delays.

- The need for an equitable spreading of costs across site developers. In providing supply reinforcements, we have identified a risk that all the costs will fall on the first developer(s) or on the later ones (if new mains only become essential at that stage). It will be important to ensure that the costs are equitably borne by all the developers. An example of dealing with the former problem is a forward funding arrangement, as discussed elsewhere in the report, with the cost recovered through a charge per dwelling.

16.49 Subject to close working between the planning authority, developers and networks there appear to be no showstoppers with regard to electricity supply.

16.50 The delivery of a new primary substation can take between 18 and 24 months.

17 TELECOMMUNICATIONS

Introduction

17.1 This section deals with Telecommunications infrastructure requirements in the Scarborough Borough Council area.

How is the system structured?

17.2 BT is the main telecommunication provider within the Scarborough council area. There are no cable operators such as Virgin Media.

17.3 The Scarborough borough is served with the telephone exchanges shown in the following figure.

Figure 17.1 Scarborough borough telephone exchanges

17.4 These exchanges serve approximately the following numbers of premises

Table 17.1 Exchange service numbers

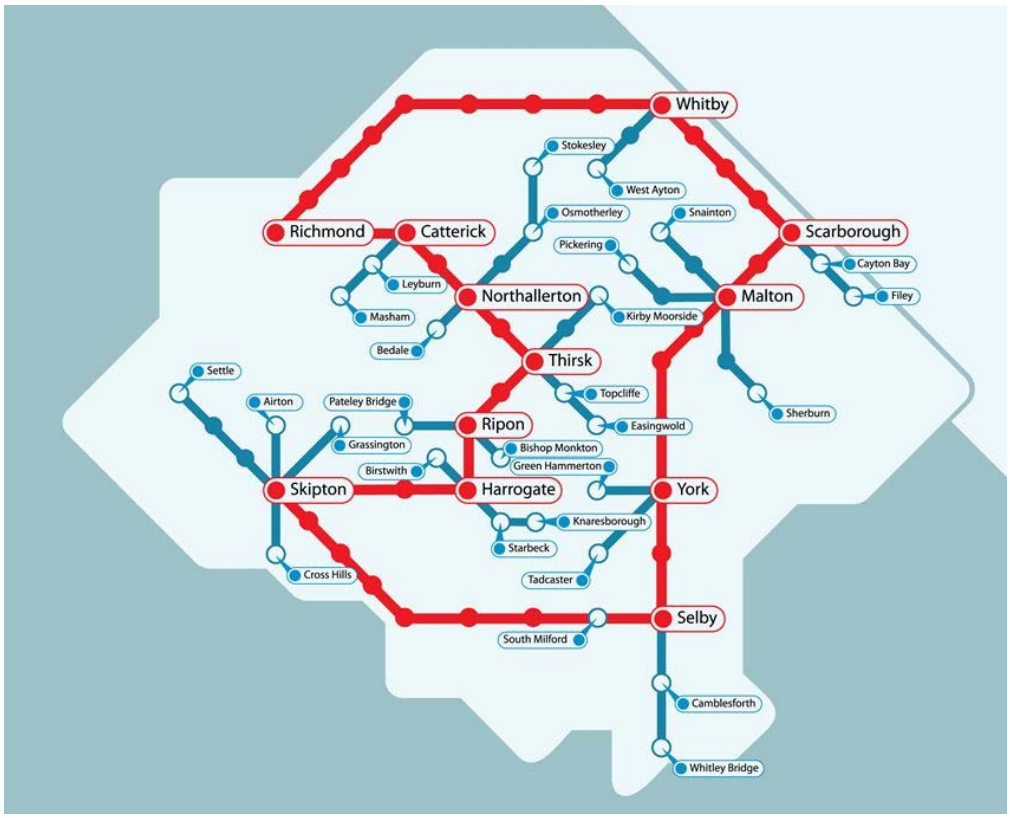
Exchange	Residential Premises	Non-Residential Premises
Scarborough	22,450	1,823
Cayton Bay	4,203	177
Filey	3,989	282
Hunmanby	2,052	139

West Ayton	3,332	122
Hackness	131	25
Cloughton	1,191	63
Robin Hoods Bay	934	113
Whitby	6,960	633
Sandsend	331	54
Sleights	1,201	67
Grosmount	255	62
Goathland	223	40

17.5 There has been a recent programme of investment in telecoms in the area. North Yorkshire County Council together with Yorkshire Forward, the European Regional Development Fund and BT invested in the creation of NYnet, a new high speed communications infrastructure across North Yorkshire.

17.6 The expanded network is shown in the following figure.

Figure 17.2 NY Net broadband infrastructure



What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

17.7 There will be significant additional demand arising from growth in housing and jobs. The timing of these infrastructure requirements will be broadly in line with the rate of development.

17.8 However, requirements are unlikely to represent a significant showstopper for growth. BT has a universal service obligation to provide a connection on request with functional internet access delivered over copper cable. This provides internet connection speeds of 28.8kbits/s as a minimum service.

17.9 If the cost of providing a connection is less than £3,400 per property, BT sets a standard charge of approximately £125.00. Where the cost of providing a new connection is in excess of £3,400, the additional charges are billed to the customer / developer. This charging principle seems to be only applied to single connection and small developments.

17.10 Broadly speaking, at a network wide level, capacity will exist, and has been bolstered by the NYNet project. Rather than the actual Telecommunications infrastructure being an area of risk to future development projects especially business related, it is the quality of the services delivered over the infrastructure that will impact future developments such as availability of broadband, broadband speeds, availability of choice in relation to telecoms providers, fibre optic infrastructure down to user level rather than copper etc.

How can new infrastructure be funded?

17.11 Funding for upgrading equipment at main exchanges is borne by BT. All on-site work ie installing ducting and chambers is undertaken by the developer or their appointed contractor with BT issuing the required ducting free of charge.

17.12 Should an end user require a connection in excess of the minimum copper connection (e.g. a fibre optic connection), the full cost of providing this service is paid for by the end user / developer. To some extent, the infrastructure required for upgraded services is already being provided. BT is implementing a programme of replacing the main copper connections from exchanges to road side cabinets with fibre optic cabling (known as fibre to cabinet).

Are the upgrades deliverable?

17.13 The upgrading of telecoms infrastructure is an ongoing process. Requirements are unlikely to materially damage viability overall, although there may be individual exceptions at very remote rural locations. However, these exceptions are highly unlikely to prejudice the overall delivery of the Core Strategy development numbers.

What are the priorities?

17.14 We have ranked this infrastructure as an “other” priority. It is not a statutory requirement. In any event, there are existing mechanisms which require providers to pick up these costs. They do not represent a priority for public sector investment.

Issues and timing assumptions

17.15 BT requires sufficient advance notice of a development (6 months minimum) to develop a plan of how to serve a new development.

17.16 The timing of infrastructure provision will be related to real-world build-out rates.

18 GAS

Introduction

18.1 This section deals with gas infrastructure requirements in the Scarborough Borough Council area.

How is the system structured?

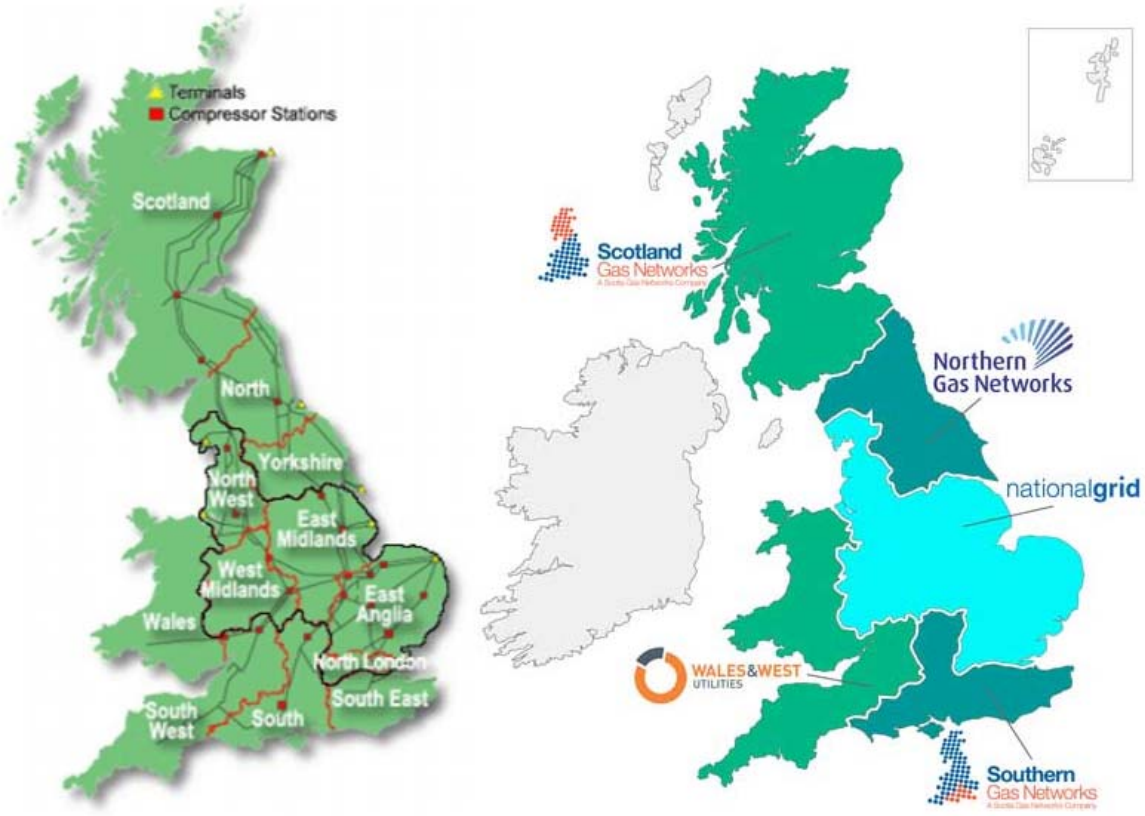
National Grid operates the national gas transmission system

18.2 National Grid operates the national gas transmission system which supplies the 12 local distribution zones across the country. Within each distribution zones gas is reduced in pressure and piped to homes and businesses through intermediate (I/P), medium (M/P) and low pressure (L/P) networks to industrial, commercial and domestic consumers.

There are twelve local distributors

18.3 The twelve local distribution zones are managed by eight gas distribution network operators (GDNs), which each cover a separate geographical region of Britain. There are also a number of smaller networks owned and operated by Independent Gas Transporters (iGTs).

Figure 18.1 The national network and local distributors



18.4 The operators of the distribution networks within the Scarborough area are Northern Gas Networks - North of England (North LDZ & Yorkshire LDZ). NGN have contracted the operational activities to United Utilities Operations.

There are a number of independent gas transporters

18.5 There are also a number of smaller networks owned and operated by Independent Gas Transporters (iGTs). Over half of all new gas connections are adopted by iGTs.

18.6 The formation of iGTs came as the result of the introduction of competition in gas distribution and connections by the regulator Ofgem.

Ofgem supervises the market

18.7 As existing gas distribution networks are natural monopolies, GDNs and iGTs are regulated by Ofgem to protect consumers from potential abuse of monopoly power. Similar to the electricity and water industries 5-year price control periods are used, which incorporate curbs on expenditure as well as incentives for efficiency and innovation. The price controls limit the amount of revenue that energy network owners can take through charges they levy on users of their networks to cover their operating costs and give a return in line with agreed expectations. As with electricity and water, a gas transporter is bound by duties imposed by the Gas Act, other relevant legislation and the conditions incorporated in their licence; if they fail to comply with any condition of its licence or any duty, they may be subject to enforcement action by Ofgem.

18.8 Ofgem reviews the price controls every five years and looks to balance the need to allow the companies appropriate resources with the need to protect customers' interests. Price controls are set for the four companies that own the local gas distribution networks.

18.9 A new 5-year price control period commenced on 1 April 2008.

Options for obtaining a new gas connection

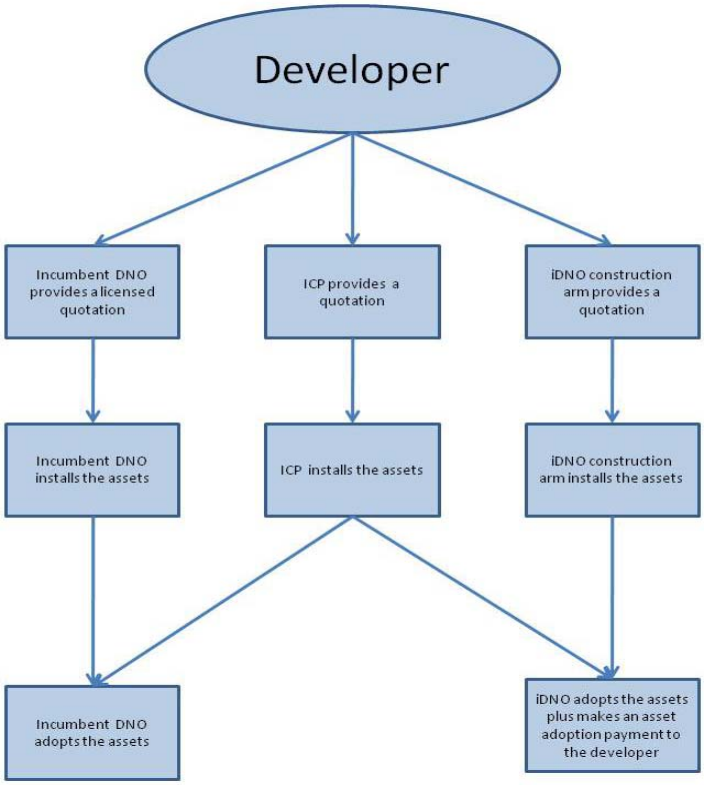
18.10 As with electricity, the introduction of competition in connections and distribution means there are three routes to obtaining a gas connection in the UK:-

- The traditional approach of obtaining a licensed quotation directly from the incumbent gas distribution company. In this case the customer pays the whole cost of the new connection and any associated reinforcement and free issues the assets to the incumbent distribution network operator;
- Through an Independent Distribution Network Operator (iDNO/iGT). These are companies who have obtained a license from the industry regulator Ofgem to operate as a gas distribution company in competition with the incumbent companies. A difference in using one of these companies is the possibility of the iDNO either contributing to the cost of the new connection or providing an opportunity to share in the profits they will make from distributing gas to the development. An existing incumbent gas distribution company can also act as an iDNO out of their normal distribution area following Ofgem making their licenses nationwide.
- Through an Independent Connection Provider (ICP), approved as an accredited contractor through the Lloyds NERS scheme for the provision of new connections.

These companies are able to provide an alternative route for the provision of the contestable work items in this case all work up to the point of connection. Once completed the ICP arranges for the installed assets to be adopted by the incumbent Gas Distribution Company or an iDNO.

18.11 The following flowchart sets out these three options and the key steps involved:-

Figure 18.2 Developers' gas connection options



Gas costs associated with development

If the work is planned into the investment programme, the reinforcement is the responsibility of the gas transporter

18.12 Where the gas transporter has already planned and financially approved general reinforcement of a Distribution Network System within their 5-year price control period, and those works are due to be undertaken prior to the Winter following connection of the new load request (which obviates the requirement for specific reinforcement), the gas transporter will fund the full cost of the general reinforcement.

18.13 Where a general reinforcement project that has already been planned and financially approved has to be upsized prior to construction due to new development and an associated increase in demand, then only the additional costs necessary to meet the customer's load can be charged to the developer.

Specific reinforcement costs fall on the first developer. Cost calculation formulas are not published

18.14 Reinforcement required to enable the connection of identified new consumers, or to permit an increase in flow rate in respect of an existing consumer, or to allow an existing consumer to change from interruptible to firm transportation, is known as 'Specific Reinforcement'. The gas transporter apportions the cost of Specific Reinforcement according to the location of that required reinforcement in relation to the Connection Charging Point.

18.15 As in the electricity and water industry, chargeable reinforcement must be paid upfront, using the 'first developer pays' principle. Northern Gas Networks use a formula to calculate the chargeable element of any reinforcement works required to feed new or increased gas loads: this formula is not published and NGN have stated they have no intention of making this publicly available.

Upstream costs are the responsibility of the gas transporter. Downsteam costs are charged to the developer

18.16 The gas transporter funds Specific Reinforcement upstream of the Connection Charging Point (subject to the Economic Test in respect of Distribution Network System reinforcements). Specific Reinforcement downstream of the Connection Charging Point is charged to the developer.

18.17 Where an independent connection provider (ICP) is used, the customer will be informed of where the connection should be made. The customer will then be offered a payment to offset the additional cost that the gas transporter estimates will be associated with their being asked to connect at the alternative point. If the customer insists on making a connection at another point, which represents a sub-optimal system development solution, then the gas transporter is entitled to charge the full cost of any associated reinforcement to the customer.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

At South Scarborough – Filey the existing medium pressure system will need reinforcement

18.18 Based on the proposed growth areas, NGN has provided the following feedback in relation to their Medium Pressure network.

18.19 As the details below show, the medium pressure network in Scarborough – Burniston, Hunmanby, Snainton and Whitby can feed the proposed development without reinforcement.

18.20 There is no gas in Flixton and the nearest main is a 6” steel medium pressure just south of Cayton. A feeder approx 4000m long is required to provide gas to Flixton.

18.21 However it is not possible to determine whether reinforcement of Low Pressure distribution networks would be required to support the projected growth at local level. Developers will have to undertake specific studies of any reinforcement when their plans and phasing is

more specific; developers would have to contribute to any reinforcement, and can be expected to take this into account in their calculations of site value.

- Scarborough – Burniston. Areas 1, 2 and 8 on the plan amount to just over 2000 dwellings. This level of development could be supported by the Scarborough - Burniston Medium Pressure (MP) system.
- Cayton - Filey. Areas 4,5, 6 and 7 add up to over 4000 houses. The MP system between Cayton - Filey could not accommodate this level of increased demand and reinforcement of the system would be needed. Any contribution to network reinforcement would be determined at time of application. In certain circumstances Northern Gas Networks would fund the cost of any network reinforcement.
- Hunmanby. Additional demand could be supplied by the MP system at Hunmanby. Assumed around 150 dwellings here.
- Snainton. Area 9, 125 dwellings - the MP system in the area could support this level of demand.
- Whitby. Area 11, 100 dwellings - the MP system at Whitby could support this level of demand.
- Flixton. There is no gas in this area. The nearest gas is a medium pressure main in Cayton approximately 0.4km to the north. For the proposed number of houses it would be more cost effective to utilise another fuel to providing heating eg oil / electricity.

18.22 Regarding costs, Northern Gas Networks use a formula to calculate the chargeable element of any reinforcement work required to feed new or increased gas loads. This is not published and Northern Gas Networks have no intention to make this available.

18.23 Northern Gas Networks are currently involved in a large scale metallic main replacement program which can, as a side benefit, increase the capacity of the network. It is known that old metallic mains were often oversized for the actual gas loads. If these mains are replaced size for size (e.g. replace a 4” cast iron main with a 125mm Pe main) there is spare capacity. In some circumstances replacement can cancel out the need for reinforcement.

18.24 Whilst Northern Gas Networks work to specific replacement guidelines calculated from risk assessments of individual mains, they are not obliged and are not prepared to give details of the program of replacement work.

How can new infrastructure be funded?

18.25 Northern Gas Networks require payment for chargeable reinforcement up front. In an extreme case, if a development of 5000 houses needed £500,000 reinforcement and the first developer was building just 10 houses, the full reinforcement cost would be payable by this first developer.

Gas networks constructed by iGTs are charged to the developer

18.26 Most new developments have gas networks constructed and operated by iGTs. This is for the following reason.

- If a Gas Transporter (as opposed to an *independent* gas transporter) was commissioned by a developer to connect a development, then developers would be charged – because Gas Transporters are no longer allowed to recover reinforcement charges by increasing the transportation charges hence the reinforcement is charged to the developer.
- If an *Independent* Gas Transport is used to connect a development, the iGT can apply a rebate to the costs which means they will recover some of the reinforcement costs from the transportation charges. They cannot do this by increasing the transportation charge but it can be a decision to extend the payback period of the site or by taking a smaller return on the investment. This option is more financially attractive to the developer.

18.27 Both of these options are business oriented and are not regulated. However Ofgem has the power to check the iGT is using the correct number of plots and house types to calculate the gas load. Any attempt to impose changes, for example by upping the transportation charges to recover the costs, would be very unpopular.

Are the upgrades deliverable?

18.28 As noted above, where developers have to contribute to any reinforcement, then they can be expected to take this into account in their calculations of site value.

What are the priorities?

18.29 These infrastructure costs are generally picked up by the private sector. They do no represent a priority for public sector investment. Prioritisation is therefore marked as “not applicable” in the spreadsheet model.

Issues and timing assumptions

18.30 In common with the other utilities, we see the following issues:

- The need for liaison and forward planning. Construction involves long term planning. It has been assumed that all wayleaves and legal requirements for the substation sites and cabling works will be forthcoming. Any delay in this process could significantly affect construction works and cause delays.
- The need for an equitable spreading of costs across site developers. In providing supply reinforcements, we have identified a risk that all the costs will fall on the first developer(s) or on the later ones (if new mains only become essential at that stage). It will be important to ensure that the costs are equitably borne by all the developers.

19 POTABLE WATER

Introduction

19.1 This section deals with potable water infrastructure requirements in the Scarborough Borough Council area.

How is the system structured?

19.2 Water company investment programmes are directed towards maintaining existing company assets and meeting new and existing statutory requirements. For potable water these particularly relate to water quality and ensuring adequate raw water resources, storage, and treatment capacity to serve their existing customer base. Under the current (AMPS) asset management plan Yorkshire Water is planning a programme of water mains rehabilitation and meter installations to achieve reductions in leakage and wastage. Water companies are required to meet new environmental targets relating to carbon emission reductions.

19.3 Provision is also made in the business plan for investment in new water treatment capacity and resources to meet growth demands.

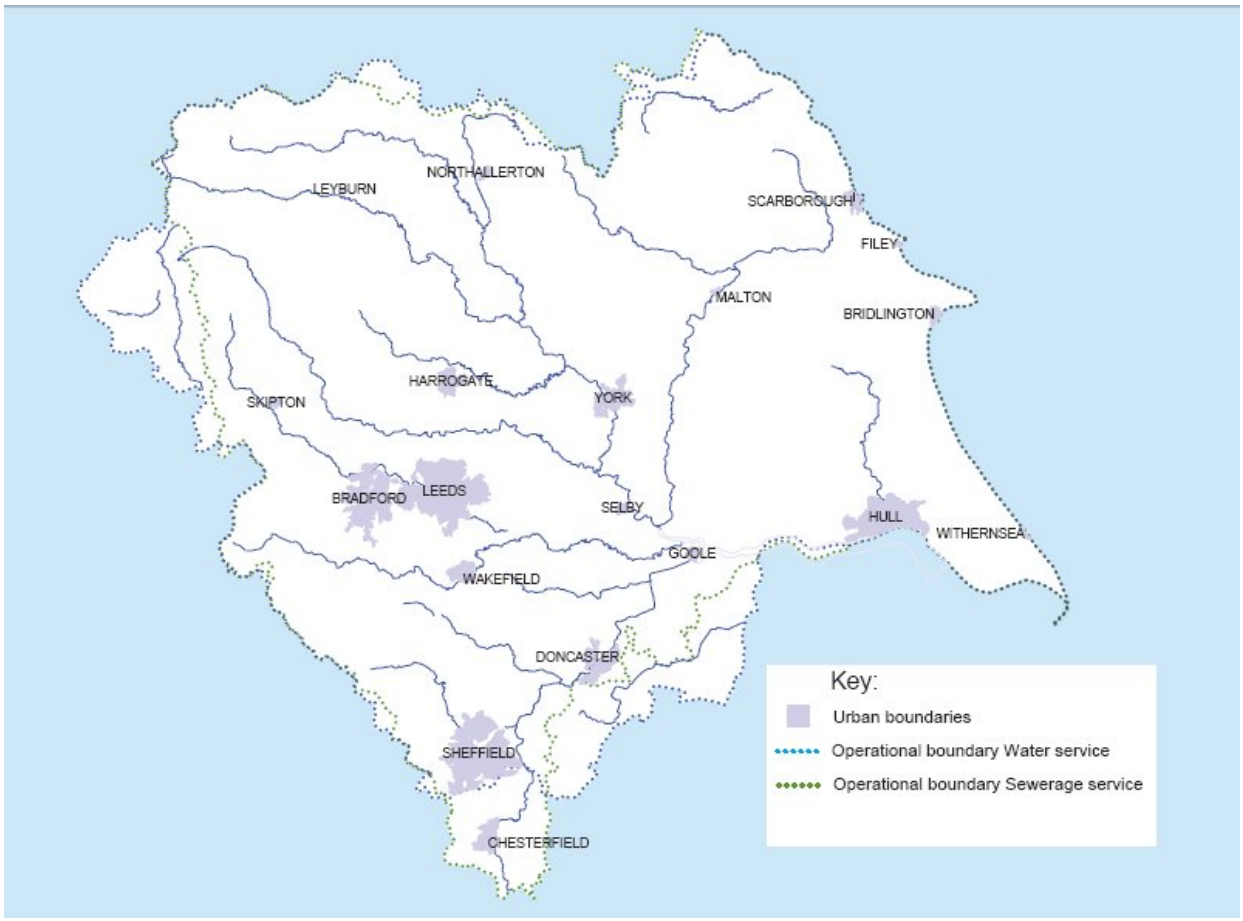
OFWAT regulates prices

19.4 Price regulation in the water industry is set on a five yearly programme, each company produces a Business Plan for approval by the Water Regulator (OFWAT). The fifth round of Asset Management Plans' (AMPS) have recently been agreed by the Regulator (OFWAT) setting out the water companies' charging and investment structures for the plan period.

Potable Water Supply Management Structure

19.5 Yorkshire Water is the Distribution Network Owner (DNO) for potable water supply and distribution networks, and for water resources and treatment, in the study area.

Figure 19.1 Water and sewerage operational boundaries



19.6 The Yorkshire Water potable water supply network currently comprises three water resource zones (see Fig. 2). These are the Grid Surface Water Zone (SWZ), East Surface Water (SWZ), and East Groundwater Zones (GWZ). Over 95% of the region is now connected to the Grid. The Scarborough Growth areas fall within the current East Groundwater Zone.

19.7 Yorkshire Water propose through AMP5 to extend the Grid to cover the East Groundwater Zone including Scarborough Growth Areas (see Fig. 3). Integration into the Grid Zone will give increased security of supply to the Scarborough Growth Areas.

Figure 19.2 Current Water Resource Zones

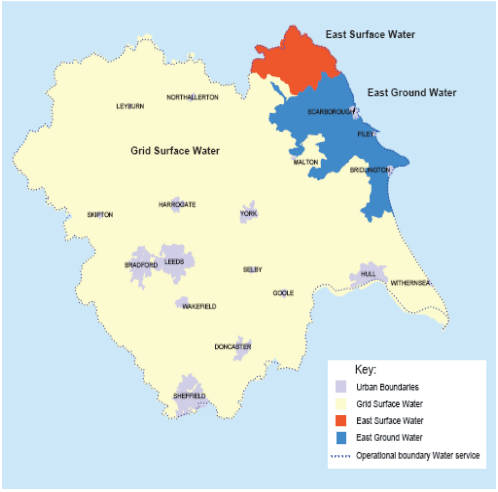


Figure 19.3 Proposed expansion to Grid Zones

No overall water deficit is expected

19.8 Yorkshire Water predict[29] that there will be no overall water deficit in the region for the 25 year period to 2034/2035 after making allowances for the impact of climate change on water resources, and reductions in demand due to conservation water saving measures. The WRMP allows for population growth based on the RSS.

19.9 Demand growth assumes that all new homes will be built in line with the Code for Sustainable Homes and have a per capita consumption not exceeding 120 litres/head/day.

An East Coast pipeline is planned to improve water distribution

19.10 Yorkshire Water have allowed in their AMP5 investment plans for the construction of a new east coast pipeline linking the Grid SWZ to the East GWZ hence linking the East GWZ to the Grid. This pipeline is programmed to be completed in 2011/12.

19.11 The Yorkshire Water Grid allows water to be transferred throughout the Zone to distribute water to meet demands as they arise making full use of the available water resources throughout the region.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

At strategic level there is no constraint on development

19.12 Yorkshire Water has adequate capacity in its existing network and upgraded network following connection of the East Coast GWZ to the Grid SWZ and consequently at a strategic level there is no constraint on development.

[29] Yorkshire Water Final Water Resource Management Plan 2010-2035 - WRMP

Local network upgrades may be necessary at site level

19.13 Local network upgrades may be necessary to provide a water supply to a particular development. These will need to be assessed at a local level. Costs associated with water mains connections and network reinforcement will need to be assessed at a site specific level.

19.14 Yorkshire Water are unable for security reasons to release strategic plans of their Grid system and therefore a detailed analysis of water mains issues at a site specific level is not possible.

How can new infrastructure be funded?

Developers are expected to pay for local network upgrades on their own sites

19.15 New off-site and on-site water mains to connect new developments to the local network are the financial responsibility of the developer.

19.16 Yorkshire Water may make some investment into the local water network infrastructure but generally they will be expecting developer contributions through the requisition process to fund network reinforcement to provide adequate capacity for specific developments.

19.17 New (off-site and on-site) water mains can be requisitioned from Yorkshire Water through Section 41 of the Water Industry Act 2003 with the requisitioner responsible for paying the Yorkshire Water's costs for providing the water main. Alternatively the person requiring the water main is able to engage a suitably accredited (WIRS) contractor to carry out the water main laying with the pipe then being vested to the Yorkshire Water as a public water main. Normally Yorkshire Water will be responsible for the physical process of connecting the new water main to the local network, with the developer requiring the supply responsible for water company costs.

19.18 Where network reinforcements or diversions are deemed necessary these can be either contestable or non-contestable depending on the strategic sensitivity or other factors of the pipeline. Contestable works are able to be undertaken by any suitably accredited contractor with the water main then being vested in Yorkshire Water. Non-contestable works must be undertaken by the Yorkshire Water.

Construction costs for a new water main are offset against the predicted income generated

19.19 Yorkshire Water will offset construction costs for a new water main against the predicted income generated from the new water main (based on a 12 year relevant period) either in the form of an asset payment where the new main is provided under the self lay option, or a commuted sum where the new water main is laid by the water company.

Some networks can be operated by organisations other than Yorkshire Water

19.20 For larger developments the on-site water mains network can be owned and operated by an accredited organisation separate from Yorkshire Water. The network operator will bulk purchase water from Yorkshire Water and be responsible for the distribution and billing for water supplied.

Are the upgrades deliverable?

19.21 Although individual site assessments will need to be made, it is thought highly unlikely that there are any showstopper issues. Potable water infrastructure is unlikely to materially damage development viability.

What are the priorities?

19.22 We have shown above that these infrastructure costs are generally picked up by the private sector. They do not represent a priority for public sector investment. Prioritisation is therefore marked “not applicable” in spreadsheet model.

Issues and timing assumptions

19.23 The main issue is common to many of the utilities matters - this is the need for an equitable spreading of costs across site developers. In providing supply reinforcements to a strategic site, there is a risk that all the costs will fall on the first developer(s) or on the later ones (if new mains only become essential at that stage). It will be important to ensure that the costs are equitably borne by all the developers. An example of dealing with this problem is a forward funding arrangement, as discussed elsewhere in the report, with the cost recovered through a charge per dwelling.

20 WASTE WATER

Introduction

20.24 This section deals with waste water (sewage) infrastructure requirements in the Scarborough Borough Council area.

How is the system structured?

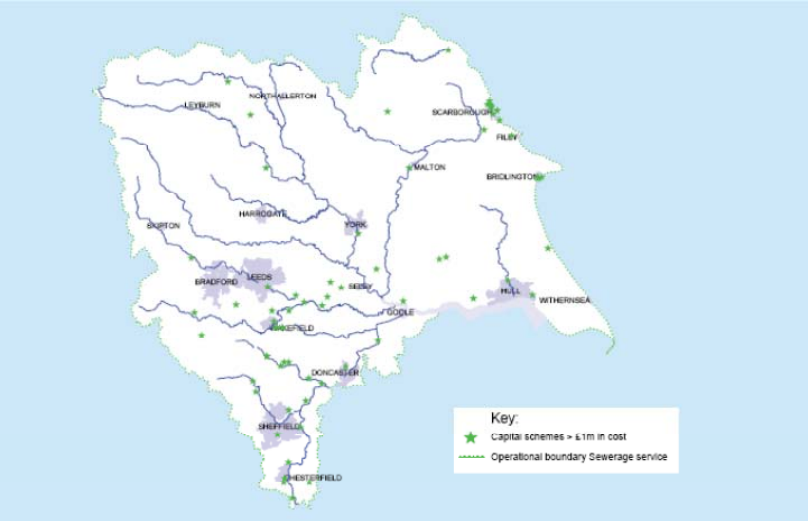
20.25 Yorkshire Water is the owner of the wastewater sewerage network, and operator of the wastewater treatment works in the study area.

20.26 Under the current (AMP5) asset management plan Yorkshire Water is planning a programme of works to reduce sewer flooding and sewer collapses, improvements to effluent quality, and enhancements to sewage treatment.

Service delivery is overseen by OFWAT. A five-year investment plan is agreed between Yorkshire Water and OFWAT

20.27 Price regulation in the water industry is set on a five yearly programme. Each water company produces a Business Plan for approval by the Water Regulator (OFWAT). The fifth round of Asset Management Plans' (AMP5) have recently been agreed by the Regulator (OFWAT) setting out the water companies' charging and investment structures for the plan period.

Figure 20.1 AMP5 Capital Schemes



Waste water management structure

20.28 Wastewater is collected via the sewerage network and delivered by a combination of gravity and pumped sewers to local wastewater treatment works. Wastewater treatment works serve specific areas and there is generally no facility to transfer wastewater to adjacent treatment works. Treatment works capacity is governed by the maximum population draining to a works, and the consented discharge from the works to a

watercourse or sea outfall. These treatment works can range from small units serving a few dwellings to large works that will accommodate Scarborough.

20.29 Yorkshire Water has a duty to accept new domestic connections into the sewerage network. Allowance has been made in the asset management plan for the needs of new customers over the life of the asset plan (2010 – 2015). At this stage there are no specific plans for investment programmes beyond this horizon.

20.30 The public sewerage network does not serve all areas. Some development sites may be too remote from the sewerage network for a connection to be economically or technically feasible. For smaller sites in these locations alternatives means of sewage disposal may be necessary.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

There are a number of specific waste water treatment capacity issues relating to certain wastewater treatment plants

20.31 Where required to meet the Growth Strategy, improvements to treatment works are planned to meet the projected growth pattern. Development will need to be phased in line with improvement works to these plants or alternatively Developers will need to fund improvements where site are brought forward in advance of the projected development plan. Yorkshire Water has provided brief comments on treatment works status:

- Filey WwTW: the works is near to capacity and existing headroom is likely to be utilised by currently committed new development. Future development sites draining to Filey will need to be phased to reflect the timing of infrastructure upgrades.
- Folkton WwTW (Southern Villages area): There is no proposal to replace the current works in AMP5. Proposed 58 houses in this catchment area. In YW's response in December 2009 they stated that a new works would almost certainly be required. However, following further work it has been established that the 58 houses can be accommodated without a requirement to increase capacity.
- Hunmanby WwTW: Proposed 63 houses in this catchment. YW can accommodate this level of growth. There is no provision to expand the works in AMP5.
- Scarborough WwTW: there is capacity available at the Scarborough WwTW for new development.
- Reighton WwTW: Proposed 12 houses in this catchment. There is marginal capacity to accommodate this growth at the WWTW. There is no AMP5 scheme proposed. If required in the future YW should be able to expand the existing WWTW.
- Seamer WwTW: Currently the works is operating at capacity. YW may be able to accommodate brownfield developments as long as it could be proven that there would be no increase in foul or surface water discharges. YW are currently investigating the works capacity to see if there is a short term fix that can be applied to allow for development within its catchment prior to any major expansion. It is expected that investigation/feasibility work will be undertaken during the latter part of 2011 prior to commencement in 2012/13 of expansion works, which should be completed within

AMP5. It is unlikely that YW will undertake an expansion scheme within the existing footprint. However they own a significant area of 'spare' land set aside for future expansion. There may be problems with amending the discharge consent, this will be investigated further as part of the feasibility work.

- Whitby WwTW: the works has available capacity but an increased discharge consent may be required.

20.32 At a site specific level where a public sewer is available for a connection local investigations will be necessary to establish available capacity. A point of connection close to the site will need to be agreed with Yorkshire Water. Developers are entitled to employ their own Contractor to install wastewater sewers (and pumping stations) and offer these sewers for adoption to the wastewater undertaker. Alternatively the Developer has the option of requisitioning the sewer from the wastewater undertaker who will construct the sewer with costs rechargeable to the Developer.

Table 20.1 Waste water

YEAR	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 /26	Total
Scarborough - Scalby area																		
Wastewater drainage																		
	Adequate capacity at WwTW based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	
Scarborough Central & other north																		
Wastewater drainage																		
	Adequate capacity at WwTW based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. No asset plans beyond 2015																	
South Scarborough																		
Wastewater drainage																		
	Adequate capacity at WwTW based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	
Whitby																		
Wastewater drainage																		
	Whitby Waste Water Treatment Works has available capacity but an increased discharge consent may be required.																	
Filey and Hunmanby																		
Wastewater drainage																		
	Filey: the works is near to capacity and existing headroom is likely to be utilised by currently committed new development. Future development sites draining to Filey will need to be phased to reflect the timing of infrastructure upgrades. In Hunmanby, sufficient capacity exists.																	
Northern Villages																		
Wastewater drainage																		
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	
Western Villages																		
Wastewater drainage																		
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	
Southern villages																		
Wastewater drainage																		
	There is no proposal to replace the current works in AMP5. In December 2009, YW stated that a new works would almost certainly be required. However, following further work it has been established that homes growth envisaged can be accommodated without a requirement to increase capacity.																	
Scarborough South - Business Park Expansion																		
Wastewater drainage																		
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	
Scarborough North - Business Park																		
Wastewater drainage																		
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	
Central Scarborough - retail																		
Wastewater drainage																		
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																	

20.33 Precise costs are not known.

How can new infrastructure be funded?

20.34 Funding mechanisms depend on the infrastructure requirement in question.

Sewage treatment works are funded by Yorkshire Water, and are allowed for in AMP5

20.35 Yorkshire Water have allowed in their AMP5 business plan for upgrading wastewater treatment works capacity to accommodate the level of growth proposed in the LDF. Costs for improvement works will be funded through customer charges (on householders across

the Yorkshire Water area). Improvement works will be carried out to match the proposed growth levels from the Local Plan replacement and will therefore not be a restriction on development. Should a specific development come forward in advance of the phased plan, or the development was not included in the AMP5 submission, Yorkshire Water would require a developer contribution towards the works.

Mains connections are funded by the developer

20.36 It is the responsibility of the site Developer to fund the works to connect to the public sewer at a point of connection agreed with the sewerage undertaker.

20.37 Yorkshire Water would expect Developer contributions towards the cost of sewer upgrades where required to service a site. This contribution may come through standard infrastructure charges paid to the sewerage undertaker for each property.

Are the upgrades deliverable?

20.38 Although individual site assessments will need to be made, it is thought highly unlikely that there are any showstopper issues. Waste water infrastructure is unlikely to materially damage development viability.

What are the priorities?

20.39 We have shown above that these infrastructure costs are generally picked up by the private sector. They do not represent a priority for public sector investment. Prioritisation is therefore marked “not applicable” in spreadsheet model.

Issues and timing assumptions

20.40 We see the issues relating to sewage as follows:

Early engagement is important

20.41 The lead times imposed by the five-yearly AMP cycle on improvements to STWs need to be reflected in early engagement between the water companies, developers and LPAs. Future rounds of planning will need to ensure that Yorkshire Water have taken plans into account – otherwise development viability could be negatively affected, with resulting risks to housing delivery.

Infrastructure must precede development

20.42 Where the discharges from proposed developments require enhancements to STWs and the networks serving them, it is essential that these are carried out and completed before the developments are occupied. Close liaison between the planning authority and the water companies is essential to ensure that the latter are aware of proposed development programmes.

Equitable cost sharing

20.43 Cost of sewerage network enhancements in a strategic site need to be borne by all the development in the area, rather than falling on those at the beginning or the end. This matter applies to many utilities.

21 SURFACE WATER DRAINAGE

Introduction

21.1 This section deals with surface water drainage in the Scarborough Borough Council area.

How is the system structured?

Responsibilities

21.2 Responsibilities for surface water drainage are as follows:

- Yorkshire Water is responsible for the public surface water sewers within the Scarborough Borough Council district.
- The Internal Drainage Boards (IDB) are responsible for the watercourses within their Drainage Districts. These IDBs exercise similar operational and regulatory powers to the Environment Agency within these areas. Note that we examine fluvial flood defence in the next section.
- The Environment Agency is responsible for watercourses which have been designated as Main River and have a duty to ensure that increased flood risk does not result from new development. Other watercourses may be under riparian ownership.

New approaches to surface drainage

21.3 Conventional surface water drainage utilises underground piped systems designed to remove surface water from a site as quickly as possible. This may result in flooding problems downstream and reduce the natural recharge of groundwater levels. Such systems may also create a direct pathway for pollutants from urban areas to pass into watercourses and groundwater.

21.4 Planning Policy Statement 25 (PPS 25) requires local planning authorities to promote the use of Sustainable Drainage Systems (SuDS) to achieve the control of surface-water. SuDS should be the default drainage measure for all new developments, with other drainage measures only considered if all SuDS forms are considered not viable.

21.5 The use of SuDS is also promoted within the Code for Sustainable Homes guidance Category 4 SUR 1. SuDS aim to mimic natural surface water drainage by dealing with surface water runoff as near to its source as possible. This can be achieved through the use of source control (eg. green roofs, permeable paving, rainwater recycling) and the attenuation and treatment of water through the drainage systems (e.g. using filter drains, swales, basins and ponds). SuDS often involve a “management train” of different techniques to manage runoff and pollution on a site.

21.6 SuDS should be the default drainage measure for all new developments, with other drainage measures only considered if all SuDS forms are considered not viable and this has been clearly demonstrated by the developer. A range of SuDS techniques can be implemented into a development to prevent the increased risk of flooding and pollution control.

21.7 The order of priority for achieving SuDS compliance is:

- Discharging to ground via infiltration;
- Discharging to a watercourse; and then
- Discharging to a sewer

21.8 As a minimum, developments on greenfield sites should attenuate surface-water runoff to existing greenfield runoff rates for all events up to and including the 1% (including climate change) storm design event.

21.9 As a minimum, developments on brownfield sites should lead to a reduction in existing runoff rates, so that, at the very least, an allowance for climate change is incorporated. Ideally a greenfield runoff rate should be implemented, but a minimum 30% reduction is recommended unless it is demonstrated that such a reduction is not practicable.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

21.10 Yorkshire Water have advised that generally there is no available capacity in public surface water sewers for additional runoff from new developments. Further assessment will be required as a site-specific level to establish the feasibility of restricted discharges to surface water sewers if no other means of drainage are available.

21.11 The Strategic Flood Risk Assessment (SFRA) has identified several Critical Drainage Areas within the Scarborough Borough Council district. These areas are particularly sensitive to increase runoff and/or volume which would significantly increase flood risk downstream of the site. It has been recommended that more stringent controls on surface water management are implemented within Critical Drainage Areas. However the SuDS design requirements for sites located outside of the Critical Drainage Areas are still very similar.

21.12 There have been moves towards exploring the concept of an overall strategy towards water management with some of the key stakeholders. Stakeholders are aware that it would be helpful to determine an overall strategy early in the planning process, rather than allowing piecemeal developments with temporary solutions. For example, amalgamating flood detention basins with public open space leads to efficiencies in land use and maintenance. Skilfully designed and masterplanned, these can be a positive asset to a new development.

How can new infrastructure be funded?

New surface water drainage infrastructure will be the developer funded

21.13 New surface water drainage infrastructure will be developer funded for each individual site. A commuted sum may also be payable by the developer where third party adoption of SuDS assets takes place to secure long term maintenance and repair.

21.14 Where connections to existing public surface water sewers are necessary the developer will be responsible for any costs incurred.

21.15 Where surface water discharges to Internal Drainage Board watercourses are necessary the IDB may require a commuted sum payment.

Are the upgrades deliverable?

21.16 Individual sites' land values should take account of the need for surface drainage. These should be explored in individual cases.

What are the priorities?

21.17 We have shown above that these infrastructure costs are picked up by the private sector. They do not represent a priority for public sector investment. Prioritisation is therefore marked "not applicable" in spreadsheet model.

Issues and timing assumptions

21.18 Widespread drainage issues have been reported throughout the district as a result of inadequate hydraulic capacity of the public sewers. Increased rainfall intensity due to the effects of climate change will put additional pressure of the existing public sewers. Therefore the implementation of SuDS to deal with flood risk should be the default drainage measure for all new developments.

22 FLOOD DEFENCE (FLUVIAL & COASTAL)

Introduction

22.1 This section deals with fluvial and coastal flood defence in the Scarborough Borough Council area.

22.2 Flooding and erosion from rivers and coastal waters is a natural process that can threaten life and cause substantial damage to property. Although these natural processes cannot be wholly prevented, their impacts can be avoided and reduced through good planning and management. Flood risk to dwellings can be exacerbated by development in inappropriate locations. New developments can potentially increase surface water runoff within a catchment and increase flood risk to other properties.

How is the system structured?

22.3 Responsibilities are as follows.

- The Environment Agency (EA) has a duty to exercise a general supervision over all matters relating to flood risk management. The EA has permissive powers to maintain and improve rivers designated as a Main River, to construct and maintain defences against flooding, to issue flood warnings, and to manage water levels.
- The Internal Drainage Boards (IDB) are responsible for the watercourses within their Internal Drainage District and exercise similar operational and regulatory powers to the EA within these areas.
- Outside of the IDB districts local authorities are the operating authority for most Ordinary Watercourses and have permissive powers to manage these watercourses. Certain watercourses are designated as COWS (Critical Ordinary Watercourses) that are particularly susceptible to flooding or where flooding will endanger property or life, the Environment Agency maintain a register of COWS.

Fluvial risk

A Strategic Flood Risk Assessment has been carried out

22.4 Planning Policy Statement 25 (PPS 25) requires local planning authorities to implement planning policy to steer new development away from areas at risk of flooding towards area at lower risk.

22.5 To assist the local planning authority with the undertaking of the Sequential Test a Strategic Flood Risk Assessment (SFRA) for North East Yorkshire has been carried out. The SFRA has recently been updated in accordance with PPS 25 (February 2010).

22.6 The SFRA contains a series of flood maps for the Scarborough Borough Council district. These flood maps should be used by the local planning authority to carry out the Sequential Test during their planned land allocations.

22.7 The order of priority when undertaking the Sequential Test is detail below:

i The overall aim of the local planning authority should be to steer new development into Flood Zone 1.

ii Where there are insufficient sites available in Flood Zone 1, then appropriate sites in Flood Zone 2 should be considered.

iii Only where there are no reasonably available sites in Flood Zones 1 or 2 should the local planning authority consider the suitability of sites in Flood Zone 3.

22.8 The implication of climate change should also be considered during the Sequential Test process.

Coastal flood defence

22.9 The operating authorities coastal engineers formally meet with Defra, the Environment Agency, North York Moors National Park and English Nature every 6 months to discuss coastal issues.

22.10 The Shoreline Management Plan (SMP) exists to promote good and prudent management of the coastline including inappropriate development. The overall aim of the SMP is to set out a plan for a 100 year horizon indicating how the coastline should be managed, taking into account the wider implications on the neighbouring coastline and the environment.

22.11 The Shoreline Management Plan sets out preferred policies to safeguard the natural and human environments and to create community confidence in delivery of this important service.

22.12 Below are the four SMP policies available to shoreline managers:

- Hold the line by maintaining or changing the standard of protection. This policy covers situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters and so on) to improve or maintain the standard of protection provided by the existing defence line.
- Advance the line by building new defences on the seaward side of the original defences.
- Managed Realignment by allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).
- No active intervention where there is no investment in coastal defences or operations.

22.13 Preference to the sequential approach should be taken during the planned land allocation process to avoid development within inappropriate areas which are subject to coastal erosion.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

22.14 As noted in the chapter above on surface drainage, there have been moves towards exploring the concept of an overall strategy towards water management with some of the key stakeholders. Stakeholders are aware that it would be helpful to determine an overall strategy early in the planning process, rather than allowing piecemeal developments with temporary solutions. For example, amalgamating flood detention basins with public open

space leads to efficiencies in land use and maintenance. Skilfully designed and masterplanned, these can be a positive asset to a new development.

22.15 Requirements are set out in the table below.

Table 22.1 Surface water drainage

YEAR	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 /26	Total
Scarborough - Scalby area																		
Flood defence (coastal and fluvial)																		
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																	
Scarborough Central & other north																		
Flood defence (coastal and fluvial)																		
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																	
South Scarborough																		
Flood defence (fluvial and coastal)																		
	Area generally in FZ1 hence low flood risk																	
Whitby																		
Flood defence (fluvial and coastal)																		
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																	
Filey and Hunmanby																		
Flood defence (coastal and fluvial)																		
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																	
Northern Villages																		
Flood defence (fluvial and coastal)																		
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																	
Western Villages																		
Flood defence (fluvial and coastal)																		
	No barriers to planned growth.																	
Southern villages																		
Flood defence (fluvial and coastal)																		
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																	
Scarborough South - Business Park Expansion																		
Flood defence (fluvial and coastal)																		
	There are no barriers to planned growth.																	
Scarborough North - Business Park																		
Flood defence (fluvial and coastal)																		
	No barriers to planned growth.																	
Central Scarborough - retail																		
Flood defence (fluvial and coastal)																		
	No barriers to planned growth.																	

How can new infrastructure be funded?

22.16 By applying the sequential approach to future development the need for funding to provide protection from flood and coastal processes would be minimised.

The EA funds and maintains fluvial and coastal flood defences – but will not pay for flood defence to support new development

22.17 The Environment Agency are responsible for the construction of new flood defences and the long term maintenance of defences which protect existing assets from Main River and

coastal flooding. The EA will not construct or upgrade flood defences to promote new development within flood risk areas.

22.18 Where new or renewed flood defences provide protection for both new and existing properties, costs are pro-rata'd between developers and the EA.

22.19 Furthermore, it is highlighted in the SMP2 that grant under the Coast Protection Act 1949, is only considered with respect to existing assets and not in relation to potential development value.

There may be adjustments in funding approaches in coming years

22.20 However, taking the broader intent of the SMP2, development opportunity has to be taken into account, given that this is a potential pressure on the coast over the next 100 years.

22.21 Such an approach may require input from several areas of interest in terms of tourism, planning, environment and coastal engineering and more closely linking long term spatial planning for the area and moving beyond sectorial funding solely under coast protection. An appropriate funding source for new flood defences may be from the Community Infrastructure Levy or similar scheme.

22.22 Any onsite flood protection measures identified within a site specific FRA will be funded by the developer for each individual development.

23 WASTE

Introduction

23.1 In this section we examine how the proposed growth in housing and employment in Scarborough affects the requirements, costs and funding of waste collection and management services in the Borough.

How is the system structured?

23.2 Waste Management in Scarborough is the responsibility of Scarborough Borough Council as the waste collection authority and North Yorkshire County Council as waste disposal authority. Both authorities are members of the York & North Yorkshire Waste Management Partnership.

23.3 The Partnership has drawn up a Waste Management Strategy to cover the period 2006-2026, which is now due for review. The current targets of the strategy are:

- Reduce: the area currently produces more waste per head than average – the target is to be among the lowest 25% by 2013
- Reuse: community focus on reuse
- Recycling and composting: target of 50% of household waste by 2020 (40% by 2010)
- Residual waste: the target is to divert 75% from landfill by 2013. Discussions with two short-listed bidders are being undertaken with a view to selecting a tender later in the year.

23.4 There are three Household Waste Recycling Centres (HWRCs) in Scarborough: at Seamer Carr, Burniston and Whitby. Those at Seamer Carr and Whitby are relatively new.

23.5 The site at Seamer Carr is adjacent to an integrated waste management facility run by Yorwaste and includes a compost area, electricity generation from methane collection, and aggregates recycling as well as landfill. It also has a demonstrator pilot thermal treatment plant at the commissioning stage which will produce electricity and heat for reuse.

What are the infrastructure requirements arising from growth? When is infrastructure needed? Who will provide it? What are the costs?

As the majority of growth is in the South of the Borough, Seamer Carr HWRC will need to be expanded

23.6 There is enough capacity at the Whitby and Burniston HWRCs to cope with the small proportion of growth to 2026 planned for the north of the Borough. Whitby is relatively new and Burniston has recently been upgraded to increase its capacity.

23.7 As the majority of projected growth is in the south of the Borough, most of the increased demand will fall on Seamer Carr. Seamer Carr is currently receiving 6,000 tonnes of waste per annum. North Yorkshire County Council estimates that it could deal with a 20% increase to 7,200 tonnes per annum. This is based on the peak deliveries at the site in any 12 month period since it opened in 2005. However, it must be noted that at this peak,

service delivery was poor compared to present time as excessive queuing time was a frequent problem at weekends and bank holidays, and the knock on affect of this is to reduce recycling performance. At 60% this site is performing below the County average of 69%. The County Council estimate that the proposed scale of development at Middle Deepdale alone will put pressure on Seamer Carr.

The Seamer Carr site is owned by the County Council and there is space to expand

23.8 The existing catchment of Seamer Carr is estimated to be 15,560 households. The 5,475 new dwellings proposed for the south of the Borough will fall within this catchment area, an increase of 35%. It is estimated that this increase will generate an estimated additional demand of 2,000 tonnes per annum, of which 1,200 can be absorbed by the existing facility at Seamer Carr (although as mentioned earlier this will affect service delivery and recycling performance).

23.9 Expansion of the Centre to meet the balance of the demand from planned growth to 2026 will cost an estimated £450,000 – this is based on the 2005 costs to consent and build the existing site (pro-rated to reflect the size of expansion compared to the existing site) and inflated to 2016.

Seamer Carr will need to be expanded by 2020

23.10 Based on projected development rates, and taking into account the deterioration in performance of Seamer Carr at its maximum current throughput, it will need to be expanded between 2016 and 2020.

23.11 There are no proposals to expand the facility in the current Waste Management Five-Year capital plan, and no discussions have yet been held about the next revision of the capital plan.

The Borough Council will need two additional collection rounds and up to 10 bring sites

23.12 Scarborough Borough Council as the waste collection authority will need to service the additional 35% of dwellings predicted in the catchment area.

23.13 Two additional collection rounds will be required by 2026: the two vehicles required will cost about £180,000 each which would have to be funded through the Councils Vehicle, Plant and Equipment (VPE) fund. As new properties are occupied they will be liable for Council Tax and a proportion of this represents a contribution to the cost of waste collection; however, this revenue income stream may not reflect the actual revenue cost. Additional depot facilities will not be required.

23.14 On the current proposed development trajectory the first vehicle will be required in 2012; the second in 2019.

23.15 The Council currently operates an alternate weekly collection of residual and co-mingled recycling. Garden waste is also collected fortnightly. Glass is collected through a network of bring sites and this will need to be expanded to meet demand if the recycling scheme remains unchanged (perhaps an additional 10 sites). However, the Council is exploring the

possibility of co-mingling glass with the other recyclables collected at some future date depending upon the available technology and quality of end product. Assuming that the bring sites will be required, they will cost £3,000 each: total cost £10,000. As the need for them is fairly directly related to growth the costs will be spread fairly evenly through the plan period, and can be met from the Borough's own resources.

A new waste transfer station will also be needed but current levels of waste are the main driver for this

23.16 North Yorkshire County Council is currently procuring a residual waste treatment plant to reduce the amount of residual waste being sent to landfill. This waste treatment plant will not be located in the Borough, so there is a requirement for waste transfer stations for bulking up residual waste collected by the Borough Council and from HWRCs for onward transport to the treatment plant. The main driver for waste transfer stations is the need to transfer residual waste from existing dwellings and businesses.

23.17 The north of the Borough is already covered by a waste transfer station at Whitby, and the projected low increase in dwelling stock growth through the period of this plan indicates that the existing facility will be able to cope with demand throughout the plan period.

23.18 Budgetary provision has been made for a waste transfer station in the south of the Borough in 2013, and Seamer Carr is a potential location for this development. Whilst there is a significant projected increase in the number of properties served by this facility during the life of this plan, the transfer station has not yet been designed and the projected increase can be addressed at the design stage. No mechanism has been established to calculate the additional build costs associated with this additional throughput, so no developer contributions can be identified as part of this report.

How can new infrastructure be funded?

Developer contributions are sought to fund this expansion

23.19 No funding has been identified to date to improve Seamer Carr HWRC. There are two potential sources of funding for an expansion of Seamer Carr: prudential borrowing by the County Council or developer contributions.

23.20 Because of predicted pressure on budgets, the view of the County Council is that the only way expansion could be afforded is through developer contributions.

23.21 Funding for vehicles and bring sites is also sought.

Issues, dependencies and barriers to growth

23.22 As the Seamer Carr site is owned by the County Council and has room for expansion of the HWRC there do not appear major barriers to making provision for growth, subject to the availability of funding.

24 TABULAR SUMMARY OF REQUIREMENTS, COSTS AND PROJECT-RELATED FUNDING

24.1 In the table overpage we summarise all of the infrastructure requirements, costs and project-related funding.

24.2 Note that funding from CIL and New Homes Bonus is dealt with separately.

Table 24.1 Summary of infrastructure requirements, costs and project-related funding

	Priority	Capital or revenue?	Known **gross** cost (not specifically tailored to impact of attributable growth)	Borough impact proportion: % gross costs attributable to growth	Known infrastructure costs attributable to growth ("growth cost")	Funding via mainstream / public agency	Funding via utility companies	Known/ reasonably anticipated funding from other possible sources	Known **Gross** costs after anticipated funding ("Gross cost funding gap")	Known **Growth** costs after anticipated funding ("Growth cost funding gap")
(A) TRANSPORT										
Castle Road / North Marine Road	Essential	Capital	£360,000	50%	£180,000				-£360,000	-£180,000
Northstead Manor Drive / Burniston Road	Essential	Capital	£360,000	50%	£180,000				-£360,000	-£180,000
Scalby Road / Falsgrave Road	Essential	Capital	£390,000	50%	£195,000				-£390,000	-£195,000
Scalby Road / Manor Road	Essential	Capital	£310,000	50%	£155,000				-£310,000	-£155,000
Stepney Road / Stepney Drive	Essential	Capital	£190,000	50%	£95,000				-£190,000	-£95,000
Scalby Road / Stepney Drive priority	Essential	Capital	£782,000	50%	£391,000				-£782,000	-£391,000
Dunslow Road / A64	Essential	Capital	£95,000	100%	£95,000				-£95,000	-£95,000
Musham Bank	Essential	Capital	£638,000	100%	£638,000				-£638,000	-£638,000
Queen Margaret's Road / Seamer Road	Essential	Capital	£20,000	50%	£10,000				-£20,000	-£10,000
Cayton Link Road (conservative view)	Essential	Capital	£26,600,000	100%	£26,600,000				-£26,600,000	-£26,600,000
Middle Deepdale link road and bridge	Essential	Capital	£11,000,000	100%	£11,000,000			£11,000,000	£0	£0
Sub total			**£40,745,000**		**£39,539,000**	**£0**	**£0**	**£11,000,000**	**-£29,745,000**	**-£28,539,000**
(B) EDUCATION										
Primary and Early Years - South Scarborough - South Cayton	Essential	Capital	£14,426,489	100%	£14,426,489		£0	£2,500,000	-£11,926,489	-£11,926,489
Primary and Early Years - Filey and Southern Villages	Essential	Capital	£379,967	100%	£379,967		£0	£0	-£379,967	-£379,967
Primary and Early Years - Central Scarborough	Essential	Capital	£4,253,179	100%	£4,253,179		£0	£0	-£4,253,179	-£4,253,179
Primary and Early Years - Northern Villages	Essential	Capital	£478,023	100%	£478,023		£0	£0	-£478,023	-£478,023
Secondary - South Scarborough - South Cayton	Essential	Capital	£11,587,303	100%	£11,587,303		£0	£0	-£11,587,303	-£11,587,303
Secondary - Filey and Southern Villages	Essential	Capital	£872,599	100%	£872,599		£0	£0	-£872,599	-£872,599

	Priority	Capital or revenue?	Known **gross** cost (not specifically tailored to impact of attributable growth)	Borough impact proportion: % gross costs attributable to growth	Known infrastructure costs attributable to growth ("growth cost")	Funding via mainstream / public agency	Funding via utility companies	Known/ reasonably anticipated funding from other possible sources	Known **Gross** costs after anticipated funding ("Gross cost funding gap")	Known **Growth** costs after anticipated funding ("Growth cost funding gap")
Sub total			**£31,997,560**		**£31,997,560**	**£0**	**£0**	**£2,500,000**	**-£29,497,560**	**-£29,497,560**
(C) HEALTH										
Scarborough North - 2GP surgery	Essential	Capital	£420,000	100%	£420,000	£162,750			-£257,250	-£257,250
Scarborough North - satellite service	Essential	Capital	£50,000	100%	£50,000	£19,375			-£30,625	-£30,625
South Scarborough - Middle Deepdale - 2GP surgery	Essential	Capital	£462,000	100%	£462,000	£179,025		£250,000	-£32,975	-£32,975
South Scarborough - South Cayton - 3GP surgery	Essential	Capital	£648,000	100%	£648,000	£251,100			-£396,900	-£396,900
Filey/Hunmanby - improvement of existing facilities	Essential	Capital	£150,000	100%	£150,000	£150,000			£0	£0
Sub total			**£1,730,000**		**£1,730,000**	**£762,250**	**£0**	**£250,000**	**-£717,750**	**-£717,750**
(D) OPEN SPACE & LEISURE										
Natural parks and green space	Other	Capital	£623,310	100%	£623,310		£0	£0	-£623,310	-£623,310
Urban parks	Other	Capital	£1,505,435	100%	£1,505,435		£0	£0	-£1,505,435	-£1,505,435
Amenity green space	Other	Capital	£357,760	100%	£357,760		£0	£0	-£357,760	-£357,760
Outdoor sports facilities	Other	Capital	£1,304,697	100%	£1,304,697		£0	£1,000,000	-£304,697	-£304,697
LEAPS, NEAPs and SEAPs	Other	Capital	£857,673	100%	£857,673		£0	£0	-£857,673	-£857,673
Sports Village, including Community Stadium	Other	Capital	Funding neutral	100%	Not known		£0	£0	Not known	Not known
Dual use leisure centre, Filey	Other	Capital	£3,500,000	100%	£3,500,000		£0	£0	-£3,500,000	-£3,500,000
Athletics track and all-weather pitch	Other	Capital	Funding neutral	100%	Not known		£0	£0	Not known	Not known
Open air theatre and water park, North Bay	Other	Capital	Funding neutral	n/a	Not known		£0	£0	Not known	Not known
Sub total			**£8,148,875**		**£8,148,875**	**£0**	**£0**	**£1,000,000**	**-£7,148,875**	**-£7,148,875**

	Priority	Capital or revenue?	Known **gross** cost (not specifically tailored to impact of attributable growth)	Borough impact proportion: % gross costs attributable to growth	Known infrastructure costs attributable to growth ("growth cost")	Funding via mainstream / public agency	Funding via utility companies	Known/ reasonably anticipated funding from other possible sources	Known **Gross** costs after anticipated funding ("Gross cost funding gap")	Known **Growth** costs after anticipated funding ("Growth cost funding gap")
(E) COMMUNITY										
New community centre, South Cayton	Other	Capital	£1,800,000	100%	£1,800,000		£0	£0	-£1,800,000	-£1,800,000
New community centre, Scalby	Other	Capital	£792,000	100%	£792,000		£0	£0	-£792,000	-£792,000
Maintenance of South Cayton community centre	Other	Revenue	£251,424	100%	£251,424		£0	£0	-£251,424	-£251,424
Maintenance of Scalby community centre	Other	Revenue	£351,994	100%	£351,994		£0	£0	-£351,994	-£351,994
Sub total			**£3,195,418**		**£3,195,418**	**£0**	**£0**	**£0**	**-£3,195,418**	**-£3,195,418**
(F) EMERGENCY SERVICES										
Police response base	Essential	Capital	£390,000	100%	£390,000		£0	£0	-£390,000	-£390,000
3x local police stations	Essential	Capital	£90,000	100%	£90,000		£0	£0	-£90,000	-£90,000
Ambulance	Essential	Capital	£50,000	100%	£50,000		£0	£0	-£50,000	-£50,000
Sub total			**£530,000**		**£530,000**	**£0**	**£0**	**£0**	**-£530,000**	**-£530,000**
(G) UTILITIES										
Electricity - new primary sub-station - South Scarborough	Essential	Capital	£3,000,000	100%	£3,000,000	£0	£3,000,000	£0	£0	£0
Gas	Essential	Capital	Not known	100%	Not known	£0	All costs to developer / provider	All costs to developer / provider		
Waste water - upgrade of WwTW	Essential	Capital	Not known	100%	Not known	£0	All costs to developer / provider	All costs to developer / provider		
Waste water - new WwTW to serve Southern Villages	Essential	Capital	Not known	100%	Not known	£0	All costs to developer / provider	All costs to developer / provider		

	Priority	Capital or revenue?	Known **gross** cost (not specifically tailored to impact of attributable growth)	Borough impact proportion: % gross costs attributable to growth	Known infrastructure costs attributable to growth ("growth cost")	Funding via mainstream / public agency	Funding via utility companies	Known/ reasonably anticipated funding from other possible sources	Known **Gross** costs after anticipated funding ("Gross cost funding gap")	Known **Growth** costs after anticipated funding ("Growth cost funding gap")
Waste water - upgrade of Reighton WwTW	Essential	Capital	Not known	100%	Not known	£0	All costs to developer / provider	All costs to developer / provider		
Waste water - upgrade of Seamer WwTW	Essential	Capital	Not known	100%	Not known	£0	All costs to developer / provider	All costs to developer / provider		
Sub total			**£3,000,000**		**£3,000,000**	**£0**	**£3,000,000**	**£0**	**£0**	**£0**
(H) WASTE										
Seamer Carr HWRC	Essential	Capital	£450,000	100%	£450,000		£0	£0	-£450,000	-£450,000
2x waste collection vehicles	Essential	Capital	£360,000	100%	£360,000		£0	£0	-£360,000	-£360,000
Sub total			**£810,000**	**£2**	**£810,000**	**£0**	**£0**	**£0**	**-£810,000**	**-£810,000**
(I) ADMINISTRATION										
Adminstration costs of tariff and demand management staffing	Essential	Revenue	£450,784	100%	£450,784	£0	£0	£0	-£450,784	-£450,784
TOTAL ALL INFRASTRUCTURE			£ 90,607,637		£ 89,401,637	£ 762,250	£ 3,000,000	£ 14,750,000	-£ 72,095,387	-£ 70,889,387

25 SUMMARISING THE "GROWTH BARRIERS"

Introduction

25.1 In this stage we have taken our findings from the sections above and used this information to provide what we are calling "traffic lights" tables. These are intended to make the main infrastructure issues at each strategic site quickly understandable.

25.2 Delivery issues for both housing and employment components of the strategic sites have been considered.

Defining "growth barriers"

25.3 "Growth barriers" may arise when the absence of certain types of infrastructure might mean that the housing and jobs growth at a strategic site might not be deliverable at a given point in time. Long lead times for the implementation of certain types of infrastructure may be a particular problem here. Examples might include a shortage of clean water or sewage capacity, or capacity in electricity supply. Clearly, housing and jobs growth would not be possible in the absence of these basic services.

How the "traffic light" tables work

25.4 We have provided analysis tables for each strategic site. Where necessary, we have broken the strategic sites down into their constituent parts.

What the red, amber and green bars mean

25.5 We have set out a timetable of constraints at site level using a "traffic light" format to allow a quick understanding of the issues.

- A red bar means that issues present a barrier to housing build out. In some instances, this is a unambiguous statement that housing development in a certain place is straightforwardly impossible given the infrastructure constraints that are presently in place – for example, the absence of a water main until a certain point in time. In the case of transport, the red bar shows when there is insufficient transport capacity to properly allow development forward. Where red bars are in place, action will be needed to fix problems before development can proceed. At what point in time exactly this red bar stops, and goes either green or amber, is a matter of professional judgement. Of course, development of either jobs or housing is *possible* during this "red" period, but it is likely to have negative effects[30].
- An amber colour suggests that development can in some instances proceed, but "with caution". In some instances, there may be some barriers that remain to overcome. In other instances (such as in the case of education or green space) we have used the

[30] Firstly, congestion is likely to rise further, with consequent economic impacts; secondly, where there is an absence of proper alternatives to car use from the start of a new development, new residents attracted to developments will have commuting patterns and habits of car use that will militate against the sustainable use of public transport in future; thirdly, there are clear sustainability issues involved.

amber bar to show when the successful delivery of infrastructure depends on policy choices and the allocation of resources.

- Green indicates that there are no barriers to progress that are apparent at this time at are known to our consultees. Clearly, this table should be reviewed as the development process progresses, and detail added over time. As we pointed out above, service providers have in all cases reserved the right to adjust their infrastructure requirements as more analysis emerges.

25.6 Finally, it is worth being absolutely clear as to what the traffic light bars are referring to. Because infrastructure investment is a means to an end – in this case, getting housing and jobs delivered - the traffic light bar refers to the extent to which housing development is affected by infrastructure investment. It does not refer to barriers to the investment itself. So, for example, a red bar on gas means that the lack of gas infrastructure forms a barrier to housing build out, so housing build out cannot take place – rather than meaning that there are some general barriers to the creation of gas infrastructure.

Assumptions we have used on the "site start delay" line

25.7 This section deals with the time take for site assembly, planning agreement, and masterplanning.

We have taken account of research which shows average site start delays

25.8 Some sites, particularly those with currently complex patterns of site ownership, can be expected to take considerable time in site assembly and planning processes. This needs taking into account when looking at delivery trajectories. Looking at the years 1980-2004, work by Colin Buchanan has analysed the time taken between the submission of planning applications for 36 strategic sites and the first build out year. The results are shown in the following table, and suggest that there is a considerable time between submission of planning applications and first build out year.

Table 25.1 Time between application submission and first year on site

	All strategic sites	**1000-1,999 dwellings**	**2,000 to 2,999 dwellings**	**3000+ dwellings**
Average time between application submission and first build year	5yrs	4.7yrs	5yrs	5.5yrs
Shortest lag time	1yr	1yr	1yr	3yrs
Longest lag time	13yrs	13yrs	11yr	10yrs

Source: Colin Buchanan

25.9 Obviously, the real extent of these delays will depend on a number of individual circumstances – the most important being when a planning application is submitted, and any particular site issues. We have worked with the Council to take account of local circumstances.

25.10 When we know that planning applications have already been submitted, or that developers are already on site, then we assume that these units can come forward without undue delay.

The traffic lights analysis can be used to understand the "critical path"

25.11 The traffic light analysis discussed above to draw conclusions about the issues on the "critical path" for development. The issues on the critical path are those which directly impact the planned project completion date. In project management terminology, they have no "float".

25.12 The charts allow an at-a-glance understanding of the main barriers to build out at each area.

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 /26	Total
Scarborough - Scalby area																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth can be managed.																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No immediate barriers to growth have been identified. NYP do wish to see resources made available for them to have a presence in the growth areas from an early stage, hence the amber bar from 2016. The exact location of any new facilities will need to be separately determined.																		
Education																			n/a
	SN and SC considered as one group for education. Some primary schools serving growth in these areas will be changing as part of the Primary Capital Programme - thus reducing primary capacity, whilst more primary capacity will be needed for the proposed growth. Early engagement into these programmes could influence growth requirements in this area. There is secondary capacity at Raincliffe and Scalby School to serve this area.																		
Flood defence (coastal and fluvial)																			
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library provision is needed to cope with growth. There are aspirations for further community centre provision (hence amber bar) but given the funding situation it appears sensible to seek ways of making the necessary provision in multi-use facilities.																		
Primary care services																			
	PCT not able to confirm exact requirements or locations. 2 GP facility estimated to be required for development, to be shared across Scalby, Scarborough Central and other north, and Northern Villages. Most likely located in Scarborough North/Scalby area. This would also serve as a base for satellite service addressing potential needs in Northern Villages. We have assumed that green goes amber at around 1000 population/500 dwelling growth (shared across the stated areas) then red at around 3600 population/1800 dwelling growth.																		
Strategic green infrastructure																			
	No requirements arising; consequently there are no barriers to growth.																		
Transport																			
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																		
Electricity																			
	Adequate capacity at primary substation to support growth. Reinforcement of local 11kV networks might be required. No asset plans beyond 2015																		
Gas																			
	Development can be supported by the Scarborough - Burniston medium pressure system.																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	High Mill Farm has outline consent, but has strict delivery deadlines; main delivery expected during 2012 to comply with planning conditions. Other sites, including the North Scalby site (800 units) may take longer to come forward for planning permission - so the red bar could reappear half way through the decade. It is not possible to be precise. For this exercise, we assume that there will be no barriers to the build out trajectory due to planning and site delay.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			5	10	60	108	100	100	100	100	50	100	150	150	100	100	70	50	1,353
b) Planning permissions already granted but not completed			5	10	10	8													33

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Scarborough Central & other north																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth can be managed.																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No immediate barriers to growth have been identified. NYP do wish to see resources made available for them to have a presence in the growth areas from an early stage, hence the amber bar from 2016. The exact location of any new facilities will need to be separately determined.																		
Education																			n/a
	SN and SC considered as one group for education. Some primary schools serving growth in these areas will be changing as part of the Primary Capital Programme - thus reducing primary capacity, whilst more primary capacity will be needed for the proposed growth. Early engagement into these programmes could influence growth requirements in this area. There is secondary capacity at Raincliffe and Scalby School to serve this area.																		
Flood defence (coastal and fluvial)																			
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth. Some provision will be in the form of improvements to existing facilities.																		
Libraries																			
	No further library provision is needed to cope with growth. No further community centre provision is required to cope with growth.																		
Primary care services																			
	PCT not able to confirm exact requirements or locations. 2 GP facility estimated to be required for development, to be shared across Scalby, Scarborough Central and other north, and Northern Villages. Most likely located in Scarborough North/Scalby area. This would also serve as a base for satellite service addressing potential needs in Northern Villages. We have assumed that green goes amber at around 1000 population/500 dwelling growth (shared across the stated areas) then red at around 3600 population/1800 dwelling growth.																		
Strategic green infrastructure																			
	No requirement																		
Transport																			
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																		
Electricity																			
	Adequate capacity at primary substation to support growth. Reinforcement of local 11kV networks might be required. No asset plans beyond 2015																		
Gas																			
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. No asset plans beyond 2015																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	There are no barriers to planned growth.																		
Site start delay																			
	Around 650 planning permissions already granted. These can come forward when economic conditions allow. No site delay due to planning or site assembly.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			80	240	240	240	202	90	20	20	20	20	20	0	0	0	0	0	1,192
b) Planning permissions already granted but not completed			80	150	150	150	112												642

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
South Scarborough																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, with the possible exception of South Scarborough, where the proposed level of growth may require provision of an additional ambulance 24/7by 2026. We acknowledge this possibility with an amber rating for South Scarborough from 2021.																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough, but that if such a need does arise it will be as a result of growth in South Scarborough. We acknowledge this possibility with an amber rating for South Scarborough from 2021.																		
Police																			
	No immediate barriers to growth have been identified. NYP do wish to see resources made available for them to have a presence in the growth areas from an early stage, hence the amber bar from 2016. The exact location of any new facilities will need to be separately determined.																		
Education																			n/a
	SC and Cayton considered as one group for education. All schools in this area are very stretched and will require complete new infrastructure to meet growth requirements. Early consultation with education providers will be crucial to enable proper planning to accommodate growth post 2016.																		
Flood defence (fluvial and coastal)																			
	Area generally in FZ1 hence low flood risk																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library provision is needed to cope with growth. No further community centre provision is required to cope with growth.																		
Primary care services																			
	PCT not able to confirm exact requirements or locations. New GP facilities estimated to be required for development. Together, development in South Scarborough (including Middle Deepdale, North Middle Deepdale, and South Cayton) likely to require new GP facilities (estimated at 2-3 GPs in Middle/North Middle Deepdale and other; and 3-4 for South Cayton). We have assumed that green goes amber at around 1000 population/500 dwelling growth, then red at around 3600 population/1800 dwelling growth.																		
Strategic green infrastructure																			
	No requirement																		
Transport																			
	The rough estimations available to us suggest that development would not be able to proceed on the sites in South Scarborough without significant improvement of the transport network (which may include an A64 to A165 link road and improvement A64 between and including Musham Bank and Dunslow Road roundabouts). Without improvements, further growth in this area would mean that the congestion which is currently considered broadly tolerable would exceed tolerable limits.																		
Electricity																			
	Adequate capacity at primary substation to support growth. Reinforcement of local 11kV networks might be required. No asset plans beyond 2015																		
Gas																			
	Medium Pressure network will require reinforcement to support the projected 4000 housing growth																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	As the majority of projected growth is in the south of the Borough, most of the increased demand will fall on Seamer Carr, which will need to be expanded between 2016 and 2020.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	Small part of this strategic site now has permission - 180 units with short timetable (outline planning permission lost if no progress by Nov 2011). Full planning permission expected spring 2012, with a prompt start, with commencement expect by early 2012 on the smaller portion of the site. Possible that larger site may go red, because larger portion does not have planning permission granted, so the red bar could reappear half way through the decade. It is not possible to be precise. For this exercise, we assume that there will be no barriers to the build out trajectory due to planning and site delay.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			2	4	52	100	150	150	480	480	450	450	430	535	495	460	460	460	5,158

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Whitby																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth can be managed.																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No immediate barriers to growth have been identified. NYP do wish to see resources made available for them to have a presence in the growth areas from an early stage, hence the amber bar from 2016. The exact location of any new facilities will need to be separately determined.																		
Education																			n/a
	There is capacity in all Whitby and rural primary, secondary and post 16 schools to accommodate growth requirements, and secondary capacities is forecast to double																		
Flood defence (fluvial and coastal)																			
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library or community centre provision is needed to cope with growth.																		
Primary care services																			
	Extension of existing facilities likely to be desirable, possibly to accommodate another GP, but no major barriers given relatively modest scale of development. We have assumed that green goes amber at around 1000 population/500 dwelling growth.																		
Strategic green infrastructure																			
	No requirement																		
Transport																			
	There are no major transport barriers to development in Whitby. Minor local adjustments may be required.																		
Electricity																			
	Adequate capacity at primary substation to support growth.																		
Gas																			
	Themedium pressure system in the area could support this level of demand.																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Whitby Waste Water Treatment Works has available capacity but an increased discharge consent may be required.																		
Waste																			
	There is enough capacity at the Whitby and Burniston HWRCs to cope with the small proportion of growth planned for the North of the Borough.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	No delays due to planning permission expected due to full pipeline of approved sites. As approved sites are built out, more permissions expected to be granted, so the trajectory is not expected to be obstructed by site or planning delays.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			40	148	148	148	148	48	35	35	35	35	35	0	0	0	0	0	855
b) Planning permissions already granted but not completed			40	100	100	100	100												440

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Filey and Hunmanby																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth can be managed.																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	There is need for some expansion of primary and secondary provision																		
Flood defence (coastal and fluvial)																			
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library provision is needed to cope with growth. No further community centre provision is required to cope with growth.																		
Primary care services																			
	Extension of existing facilities likely to be desirable, but no major barriers given relatively modest scale of development.																		
Strategic green infrastructure																			
	No requirement																		
Transport																			
	The rough estimations available to us suggest that development does not create transport capacity issues that would halt development. It is anticipated that the main access route to Scarborough would be along the A165.																		
Electricity																			
	Filey is provided with power from the Eastfield Primary substation. Limited capacity available which could drive reinforcement or alternative connections from Hunamby Substation (however this is within the YEDL licence area and there could be limitations on it providing capacity to the NEDL area)																		
Gas																			
	Additional demand could be supplied from the MP system at Hunmanby.																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Filey: the works is near to capacity and existing headroom is likely to be utilised by currently committed new development. Future development sites draining to Filey will need to be phased to reflect the timing of infrastructure upgrades. In Hunmanby, sufficient capacity exists.																		
Waste																			
	As the majority of projected growth is in the south of the Borough, most of the increased demand will fall on Seamer Carr, which will need to be expanded between 2016 and 2020.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	Filey has permission for around 350 units. Major strategic site makes up 300 of these 350 units, and has outline permission. Stategic site application reserved matters currently in. Drainage issue is problematic. HCA funding tied to March 2011, which is expected to accerate delivery. Assume delivery start spring 2011, but this not certain. In Hunmanby, small number of permissions currently being built out.																		
Other barriers																			
	If the HCA funding deadline is missed, and no new HCA funding is available, then economic conditions are likely to mean that delivery may not take place for some time. It is currently not possible to be certain.																		
a) Growth Trajectory (inc pps)			10	45	45	36	75	85	95	80	75	20	20	0	0	0	0	0	586
b) Planning permissions already granted but not completed			10	20	20	11	50	60	75	60	55								361

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Northern Villages																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	Lindhead Primary school is at capacity so will need to ensure scope for further expansion before proceeding. There is capacity for secondary at Scalby School in Scarborough																		
Flood defence (fluvial and coastal)																			
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library provision is needed to cope with growth. No further community centre provision is required to cope with growth.																		
Primary care services																			
	PCT not able to confirm exact requirements or locations. 2 GP facility estimated to be required for development, to be shared across Scalby, Scarborough Central and other north, and Northern Villages. Most likely located in Scarborough North/Scalby area. This would also serve as a base for satellite service addressing potential needs in Northern Villages. We have assumed that green goes amber at around 1000 population/500 dwelling growth (shared across the stated areas) then red at around 3600 population/1800 dwelling growth.																		
Strategic green infrastructure																			
	No requirement																		
Transport																			
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																		
Electricity																			
	Adequate capacity at primary substation to support growth. Reinforcement of local 11kV networks might be required. No asset plans beyond 2015																		
Gas																			
	Adequate capacity within Medium Pressure network. Reinforcement of local low pressure network might be required																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	Council is not currently entertaining applications in the villages. Permissions here are awaiting the LDF which is expected mid 2012. Permissions may follow, but real-world site start will come after that - possibly during 2014/15. Existing permissions are small scale housing developments which can come forward before 2014/15.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			5	35	35	30	25	25	0	0	0	0	0	0	0	0	0	0	155
b) Planning permissions already granted but not completed			5	10	10	5													30

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Western Villages																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	Short term fluctuations will need to be carefully monitored due to recent consents, some primary schools will be stretched and there is also unlikely to be any capacity at Filey School if consents are taken up.																		
Flood defence (fluvial and coastal)																			
	No barriers to planned growth.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library provision is needed to cope with growth. No further community centre provision is required to cope with growth.																		
Primary care services																			
	No major barriers given modest scale of development.																		
Strategic green infrastructure																			
	There are no barriers to planned growth.																		
Transport																			
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. It is anticipated that the mair access route to Scarborough would be along the A170. There would be likely to be some diffuse impact on the A64 pinch points.																		
Electricity																			
	Adequate capacity at primary substation to support growth. Reinforcement of local 11kV networks might be required. No asset plans beyond 2015																		
Gas																			
	Adequate capacity within Medium Pressure network. Reinforcement of local low pressure network might be required																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	There are no barriers to planned growth.																		
Site start delay																			
	Council is not entertaining applications in the villages. Permissions here are awaiting the LDF which is expected mid 2012. Permissions may follow, but site start will come after that - possbily during 2014/15. Existing permissions are small scale housing developments which can come forward before 2014/15.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			5	20	20	16	10	10	30	30	30	30	30	0	0	0	0	0	231
b) Planning permissions already granted but not completed			5	10	10	6													31

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Southern villages																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	There is surplus capacity at a number of primary and secondary schools (George Pindar Community Sports College) that could serve the growth in this area - no issues identified.																		
Flood defence (fluvial and coastal)																			
	Sites may be located in FZ1, FZ2, or FZ3. Individual sites will need to be Sequentially Tested to steer development to areas of lowest flood risk.																		
Public space, parks, sport and leisure																			
	New provision needed on broadly the same trajectory as growth.																		
Libraries																			
	No further library provision is needed to cope with growth. No further community centre provision is required to cope with growth.																		
Primary care services																			
	No major barriers given modest scale of development.																		
Strategic green infrastructure																			
	There are no barriers to planned growth.																		
Transport																			
	The rough estimations available to us suggest that development does not create transport capacity issues that would halt development. Access routes to central Scarborough will be either along the A165 or the A64, depending on development location. The choice of routes will help to alleviate pressure on A64 pinch points.																		
Electricity																			
	Adequate capacity available at primary substation level. Low number of new houses therefore low likelihood of 11kV network reinforcement																		
Gas																			
	N/a - No gas available and not cost effective to install - another fuel to be used eg electric / oil																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	There is no proposal to replace the current works in AMP5. In December 2009, YW stated that a new works would almost certainly be required. However, following further work it has been established that homes growth envisaged can be accommodated without a requirement to increase capacity.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	Council is not entertaining applications in the villages. Permissions here are awaiting the LDF which is expected mid 2012. Permissions may follow, but site start will come after that - possbily during 2014/15. Existing permissions are small scale housing developments which can come forward before 2014/15.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)			5	35	35	24	20	20	0	0	0	0	0	0	0	0	0	0	139
b) Planning permissions already granted but not completed			5	15	15	4													39

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Scarborough South - Business Park Expansion																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Flood defence (fluvial and coastal)																			
	There are no barriers to planned growth.																		
Public space, parks, sport and leisure																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Libraries																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Primary care services																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Strategic green infrastructure																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Transport																			
	Modelling work has shown that at some stage in the build out of the business park a left turn filter lane will be required on the Dunslow Road/A64 roundabout to accommodate traffic leaving the business park. New growth on sites which currently do not yet have planning permission on the business park will create high levels of congestion (which may be considered intolerable) without this filter lane being constructed. The filter lane would use land currently in the ownership of Scarborough Building Society. There is no certain position about when this filter lane will be required, because no interim years modelling has been carried out. There is also uncertainty around the rate of build-out for the business park sites without planning permission. For this exercise we have assumed that the filter lane improvements will represent a barrier to further development at the Business Park site by 2017 but this is subject to a significant margin of error related to a) the use of the roundabout by through traffic and b) the rate of build out of the business park.																		
Electricity																			
	Sufficient capacity available following previous reinforcement project																		
Gas																			
	Sufficient capacity available.																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	N/a. This is an employment site. Predictions of development rates would need separate study.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)																			
b) Planning permissions already granted but not completed																			

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Scarborough North - Business Park																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Flood defence (fluvial and coastal)																			
	No barriers to planned growth.																		
Public space, parks, sport and leisure																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Libraries																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Primary care services																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Strategic green infrastructure																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Transport																			
	The rough estimations available to us suggest that development does not face transport capacity issues that would halt development. However, further growth in the north of Scarborough will place further (if diffused) pressure on town centre junctions and the A64.																		
Electricity																			
	Adequate Capacity available at primary substation. Local 11kV reinforcement might be required.																		
Gas																			
	Adequate capacity available within Medium Pressure Network. Local Low Pressure reinforcement might be required.																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	N/a. This is an employment site. Predictions of development rates would need separate study.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)																			
b) Planning permissions already granted but not completed																			

YEAR		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025/26	Total
Central Scarborough - retail																			
Ambulance																			
	The Ambulance Service consider that their possible requirement for additional provision cannot be linked to specific growth areas, so there are therefore no growth area-specific issues to consider. However, levels of provision will be kept under review to ensure that cumulative demand pressures which may result from growth																		
Fire																			
	The Fire Service considers that the proposed growth will not give rise to a need for additional provision in the Borough. There are therefore no growth-area-specific issues to consider.																		
Police																			
	No barriers to growth have been identified resulting from growth in this location.																		
Education																			n/a
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Flood defence (fluvial and coastal)																			
	No barriers to planned growth.																		
Public space, parks, sport and leisure																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Libraries																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Primary care services																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Strategic green infrastructure																			
	N/a - this is an employment site. It will therefore not generate these infrastructure requirements, or be subject to these infrastructure barriers.																		
Transport																			
	There are no signficant transport barriers that obstruct the development of central retail provision. Some local improvements might be needed for any larger developments.																		
Electricity																			
	Adequate capacity available at Primary substation level. Local 11kV reinforcement could be required																		
Gas																			
	Adequate capacity available at Primary substation level. Local Low Pressure reinforcement could be required																		
Water																			
	Adequate capacity at strategic level, local connections and reinforcement works may be required. No asset plans beyond 2015																		
Wastewater drainage																			
	Adequate capacity at WwTW's based on proposed growth rates, Developer contributions may be required for providing additional capacity if development not in accordance with phasing plan. May be local connection and capacity issues.																		
Waste																			
	There are no barriers to planned growth.																		
Telecommunications																			
	No barriers to planned growth.																		
Site start delay																			
	N/a. This is an employment site. Predictions of development rates would need separate study.																		
Other barriers																			
	Not applicable																		
a) Growth Trajectory (inc pps)																			
b) Planning permissions already granted but not completed																			

26 SUMMARY OF INFRASTRUCTURE REQUIREMENTS, COSTS AND FUNDING

Introduction

26.1 In this section we summarise requirements, costs and funding of infrastructure in relation to the requirements of PPS12.

Analysing estimated infrastructure costs

Estimated "gross" infrastructure costs by category

26.2 The table below shows estimated infrastructure costs by category. The figures presented below are the "gross" infrastructure costs. These are not specifically tailored to the impact of growth, so some of these costs provide infrastructure with wider benefits to society as a whole.

26.3 Transport is the largest single component of estimated infrastructure costs across the borough, with education representing the second highest cost. The third highest cost is open space. Categories listed as 'other' – including emergency services, utilities and waste – are less significant when seen in this context, and over this time period.

Table 26.1 Gross costs of infrastructure in Scarborough borough (£)

Infrastructure Category	Known "gross" infrastructure costs
Transport	£40.7m
Education	£32.0m
Health	£1.7m
Open space	£8.1m
Community	£3.2m
Other	£4.8m
Total	**£90.6m**

Source: RTP. Note that the costs presented are gross costs over the plan period (not specifically tailored to the impacts of growth)

Refining the "gross" infrastructure costs to get an "infrastructure cost of growth"

26.4 Above, we have shown the "gross" infrastructure cost. This is useful, because it provides a broad picture of how much money will need to be spent on infrastructure in Scarborough in the plan period.

26.5 However, the key statistic in planning terms is the cost of infrastructure required to support growth (rather than a total cost of the infrastructure in Scarborough during the plan period).

26.6 There is a difference between these two numbers, because the need for infrastructure improvements (particularly transport infrastructure) cannot always be entirely ascribed to new growth. Clearly, new roads can be used by anyone.

26.7 To calculate the cost of infrastructure ascribable to growth, we have made some rough assumptions about the extent to which new infrastructure costs arise from growth alone, and shared those costs pro-rata.

26.8 The difference between the gross cost and the more refined "cost of growth" number is not very great, because most infrastructure costs arise from the need to cope with growth.

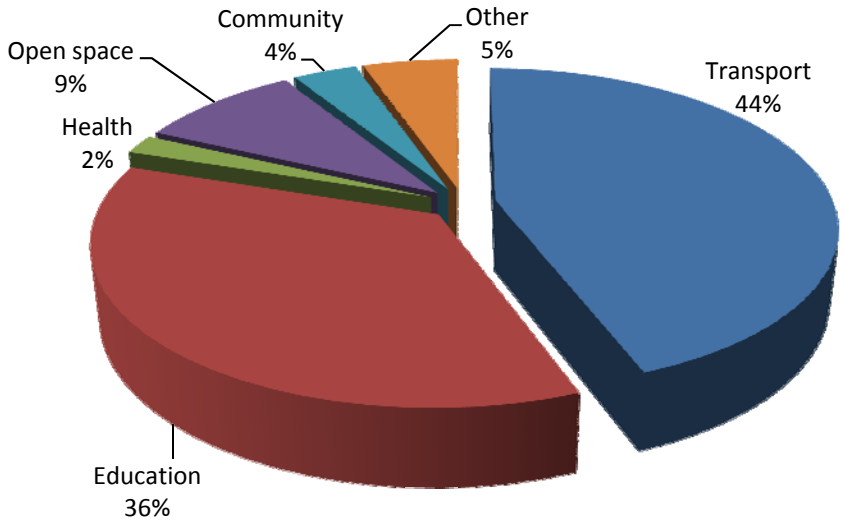
Table 26.2 Infrastructure costs attributable to growth

Infrastructure Category	Known infrastructure costs attributable to growth ("growth cost")
Transport	£39.5m
Education	£32.0m
Health	£1.7m
Open space	£8.1m
Community	£3.2m
Other	£4.8m
Total	**£89.4m**

Source: RTP

26.9 We have shown these figures as a % of the overall growth cost below as a pie chart.

Figure 26.1 Known infrastructure costs attributable to growth (%)



Source: RTP

"Big ticket" project costs

26.10 There are a small number of very big ticket infrastructure projects that have been identified as required to facilitate growth. The top five highest cost infrastructure items are shown below.

26.11 In this table, we have presented gross infrastructure costs. We have taken the gross cost here because this funding will need to be found to deliver these projects, irrespective of the extent to which they serve the immediate needs of housing growth.

Table 26.3 The five most costly infrastructure projects in Scarborough borough (£m) (gross costs)

Infrastructure project or category	Cost (£)
Link road (conservative view)	26,600,000
Primary and Early Years - South Scarborough - South Cayton	14,426,489
Secondary - South Scarborough - South Cayton	11,587,303
Middle Deepdale link road	11,000,000
Primary and Early Years - Central Scarborough	4,253,179
TOTAL	**£67.9m**

Source: RTP

Focusing on essential schemes reduces infrastructure costs

26.12 We have analysed which infrastructure items are essential to allow growth to proceed.

26.13 The table below shows that if partners were to provide only those items considered to be essential in order for development to proceed, then costs would be reduced significantly.

26.14 However, this is not to say that the items making up the 'other' category are not important. Essential items in this context represent items without which development could not be brought forward. More infrastructure is likely to be required in order to generate a good quality, well planned place.

26.15 It should be noted that a zero figure (such as for community uses) simply means that none of the identified items were considered to be essential based on the assessment used in the study.

Table 26.4 Infrastructure costs for growth by priority

Infrastructure Category	"Essential" infrastructure costs for growth	% of total "essential" costs	"Other" category infrastructure costs for growth	% of total "other" costs
Transport	£39.5m	50.7%	£0.0m	0.0%
Education	£32.0m	41.0%	£0.0m	0.0%
Health	£1.7m	2.2%	£0.0m	0.0%
Open space	£0.0m	0.0%	£8.1m	71.8%
Community	£0.0m	0.0%	£3.2m	28.2%
Emergency services	£0.5m	0.7%	£0.0m	0.0%
Utilities	£3.0m	3.8%	£0.0m	0.0%
Waste	£0.8m	1.0%	£0.0m	0.0%
Administration costs	£0.5m	0.6%	£0.0m	0.0%
Total	**£78.1m**	**100.0%**	**£11.3m**	**100.0%**

Source: RTP

Analysing estimated funding

Estimating mainstream funding, utilities funding and New Homes Bonus

26.16 We have assessed the potential availability of mainstream public funding to pay for the infrastructure requirements resulting from the assumed growth. We have interviewed

service providers, consulted strategic documents, and undertaken our own research to get an answer here.

26.17 The results demonstrate that very little funding can be expected at the moment. Public sector funding may recover after 2016, but little can be assumed at the moment.

26.18 New Homes Bonus funding is an important funding source. We have explained our approach in the relevant section of this report.

26.19 Funding secured through S106 refers to the emerging (but unsigned) S106 deal at Middle Deepdale.

26.20 Funding for utilities will generally be provided privately, either by the utilities company or the developer. Utilities costs are therefore assumed to net off with available funding. Utilities are covered on the following table, but only for completeness.

Table 26.5 Mainstream and utilities funding

Infrastructure Category	Funding via mainstream public/ agency	Funding via utility companies	Funding secured through S106
Transport	£0.0m	£0.0m	£11.0m
Education	£0.0m	£0.0m	£2.5m
Health	£0.7m	£0.0m	£0.3m
Open space	£0.0m	£0.0m	£1.0m
Community	£0.0m	£0.0m	£0.0m
Emergency services	£0.0m	£0.0m	£0.0m
Utilities	£0.0m	£3.0m	£0.0m
Waste	£0.0m	£0.0m	£0.0m
Administration costs	£0.0m	£0.0m	£0.0m
Total	**£0.7m**	**£3.0m**	**£14.8m**

Source: RTP

Table 26.6 New Homes Bonus funding (estimated)

Funding stream	Total funding	Assumed share for Infrastructure	Possible funding for Infrastructure from NHB
New Homes Bonus (assuming 40% affordable housing, 9669 units delivered)	£47.7m	10%	£4.8m

Source: RTP using DCLG New Homes Bonus Calculator[31]

Estimating developer contributions through CIL and Section 106

26.21 Developer contributions make an important contribution to the funding of infrastructure. We have explained our approach in section 4.

[31] See http://www.communities.gov.uk/housing/housingsupply/newhomesbonus/

Table 26.7 Possible CIL contributions (high level estimates)

Category	CIL
Possible estimate charge per sqm	£55
Average home size m2 (rounded)	90
Number of homes without planning permission	6885
Assumed % of affordable housing	20%
Number of homes chargeable	5508
Total possible contribution	£27,264,600
Notes	Calculated on the basis of the number of homes without planning permission

Source: RTP

Putting costs and funding together

The headline figures on costs, funding and developer contributions are as follows.

Known infrastructure costs attributable to growth ("growth cost") of	-	£89.4m
Mainstream funding of	+	£0.8m
Utilities funding of	+	£3.0m
S106 funding at Middle Deepdale	+	£14.8m
CIL funding of	+	£27.3m
New Homes Bonus funding of	+	£4.8m
Leaves a funding gap of	-	£38.9m

Seeing the funding gap on a per annum basis makes the gap appear more tractable

26.22 Whilst there is a large funding gap, it should be borne in mind that this plan runs until 2026. Per annum funding appears much more tractable.

Cashflow issues

26.23 We used our work to look at particular cost and funding "pinch points" – for example, the times where up-front infrastructure requirements and costs ran ahead of funding.

26.24 The success of showing that the Local Plan replacement in Scarborough Borough is deliverable will, to a significant degree, depend on the ability to deliver the infrastructure required in the first five years. One of the fundamental requirements therefore is that the necessary funding is in place to fund infrastructure required in the short term.

26.25 From a developer's point of view, if a development is clearly not viable in the first five years, it is unlikely that a developer will proceed. Given the greater level of uncertainty about what is likely to happen after the first five years, developers are typically less concerned with the detail of how these phases will be brought forward.

26.26 The table below shows a simplified infrastructure cashflow situation for the first five years. It is important to be clear that this is not a developers' individual cashflow for their development. Rather, it is a simple view of the total infrastructure costs, set against the available funding. The table necessarily makes some assumptions. These are

- that mainstream funding, where available, will be found in the same year that as infrastructure demands are created by growth;
- that New Homes Bonus is paid by central Government in line with the assumed delivery trajectory, and that payments are received in full each year.[32] (For this calculation, we have taken the total figure that the DCLG's New Homes Bonus calculator provides on the new housing projected, and multiplied it by the provided housing trajectory. Note that actual payment is spread over a 6 year period, and so a) there will be no falls in annual revenue until the first six year period is complete, and b) payments will continue to be made after the planned growth is complete. This assumption provides sufficient detail for this exercise, however.
- that CIL payments are generated in line with the assumed delivery trajectory, and exclude homes with planning permission; and
- that S106 payments for the Middle Deepdale development are paid pro-rata with build out at the site. (We have made this assumption because precise development phasing and payment phasing has not yet been agreed).

Table 26.8 Six year infrastructure cashflow

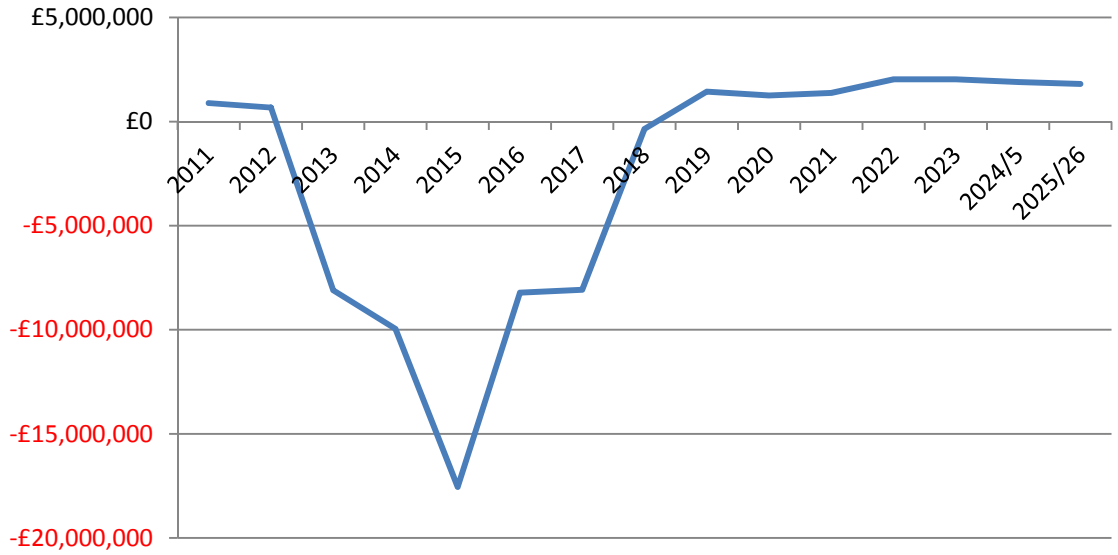
	2011	2012	2013	2014	2015	2016
Known Growth costs after anticipated mainstream, utilities and S106 funding ("Growth cost funding gap")	-243,258	-700,941	-9,706,608	-11,576,856	-19,065,071	-10,712,479
New Homes Bonus funding for infrastructure	265,112	313,494	346,571	360,394	260,669	375,205
CIL payments	863,280	1,061,280	1,259,280	1,259,280	1,259,280	2,118,600
Cashflow	885,134	673,833	-8,100,757	-9,957,182	-17,545,122	-8,218,674

Source: RTP

26.27 Over the whole of the plan period, the results of our cashflow analysis are shown below.

[32] NHB is calculated on the total increase in homes on the Council Tax register over the period. It is unrelated to S106 agreements. The trajectory information provided to us suggests that there are approximately 9669 homes in this category, although it should be noted that some units may have been delivered since these figures were provided.

Figure 26.2 Plan period infrastructure cashflow



Source: RTP

26.28 The analysis above suggests that there are cashflow problems in the early period. There are possible solutions to this problem, though, and more detailed business planning work might be carried out to look at these more closely.

How do these findings affect infrastructure delivery?

26.29 The figures above show a substantial funding gap, and some difficulties in cashflowing infrastructure provision particularly in the earlier part of the plan period.

26.30 However, this funding gap could be narrowed, and cashflow problems addressed, by the following means

- Focusing on the delivery of essential items;
- Re-prioritising the essential items. The Council may need to prioritise both within theme areas (say, prioritising the most important transport projects) and also between theme areas (say, deciding to invest in open space, rather than transport, or vice versa). Properly, these decisions rest with elected representatives and their officers on the basis of good quality information about what is realistically possible.
- Delaying the dates by which infrastructure items are required.

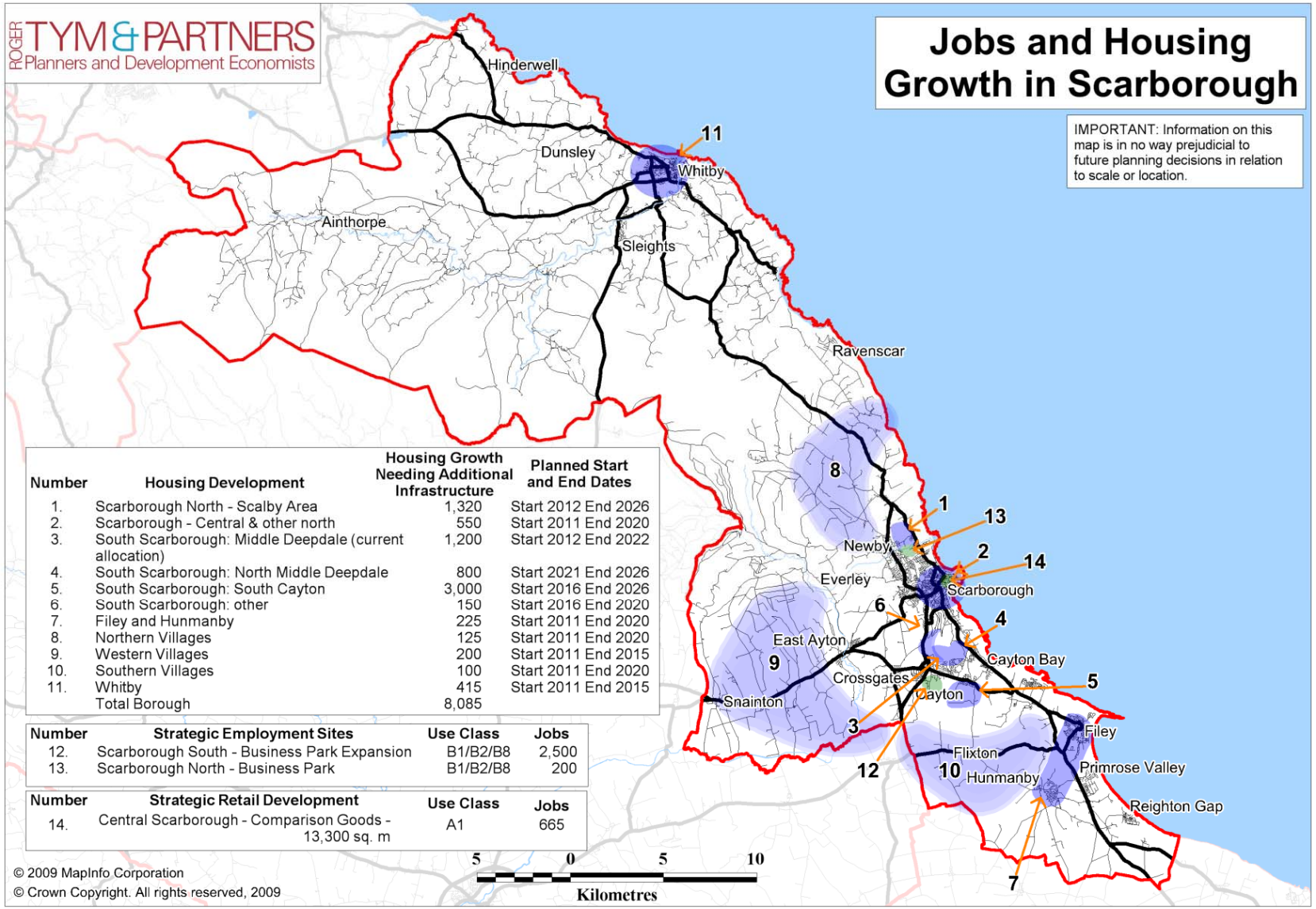
26.31 There might be a role for a Delivery Framework. If this route was taken, the Delivery Framework would need to be a very practically orientated project plan document. The Delivery Framework could do the following:

- Identify tasks on the critical path, set dates for those issues to be resolved, and clarify delivery roles and responsibilities for different organisations and individuals;
- Focus on how any problems will be resolved – in a very head-on way;
- Define issues in time sequence. This would allow the focusing of resources on short term issues and a process of active planning for medium term issues. Longer-term problems (where it is clear that fundamental changes in funding regimes or market conditions are required) could be left for future work;

- Help the political process by clarifying decisions that need to be taken, when they need to be taken, and what the ramifications of choices are.

APPENDIX 1

HOUSING AND JOBS GROWTH (BOROUGH VIEW)



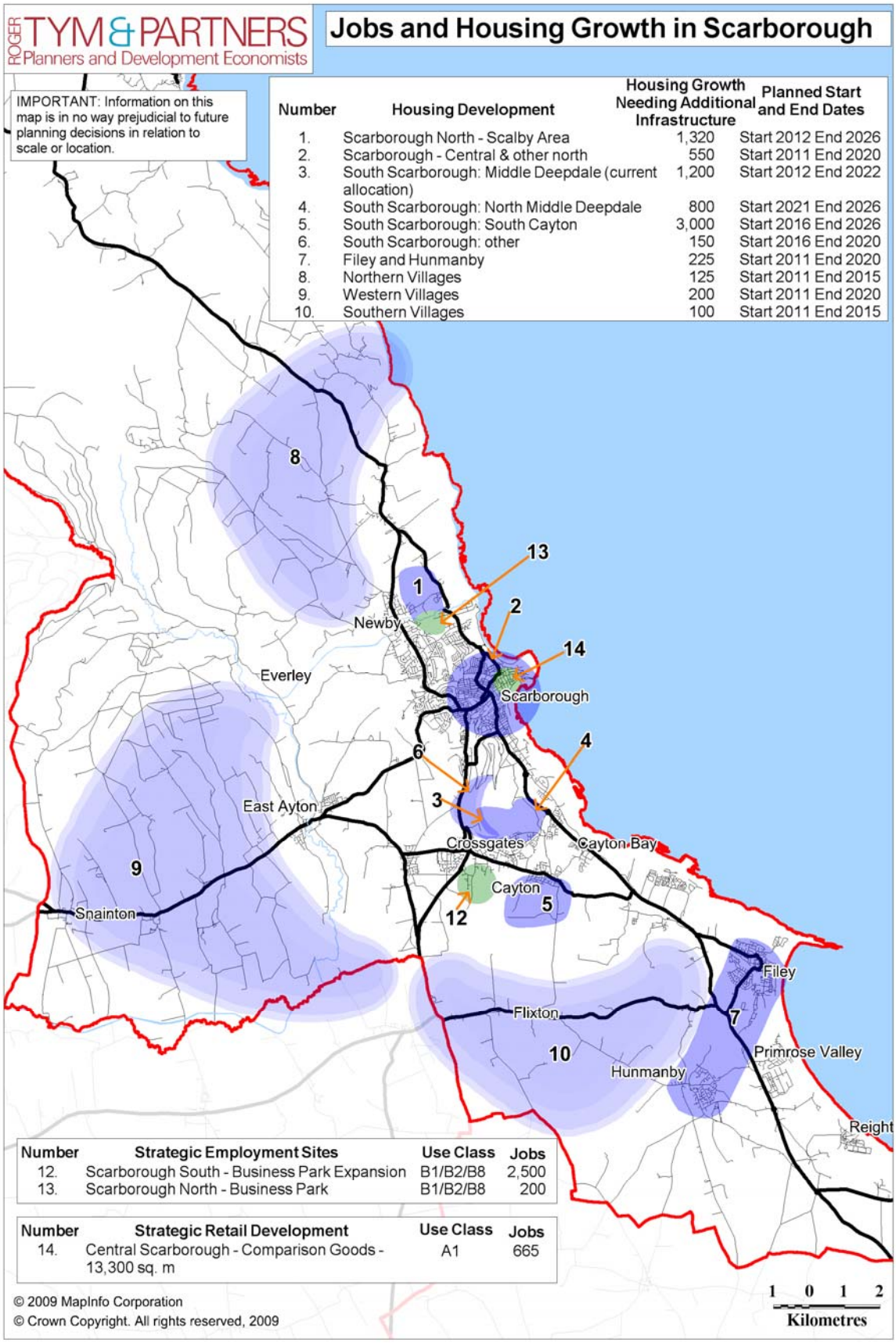
Number	Housing Development	Housing Growth Needing Additional Infrastructure	Planned Start and End Dates
1.	Scarborough North - Scalby Area	1,320	Start 2012 End 2026
2.	Scarborough - Central & other north	550	Start 2011 End 2020
3.	South Scarborough: Middle Deepdale (current allocation)	1,200	Start 2012 End 2022
4.	South Scarborough: North Middle Deepdale	800	Start 2021 End 2026
5.	South Scarborough: South Cayton	3,000	Start 2016 End 2026
6.	South Scarborough: other	150	Start 2016 End 2020
7.	Filey and Hunmanby	225	Start 2011 End 2020
8.	Northern Villages	125	Start 2011 End 2020
9.	Western Villages	200	Start 2011 End 2015
10.	Southern Villages	100	Start 2011 End 2020
11.	Whitby	415	Start 2011 End 2015
	Total Borough	8,085	

Number	Strategic Employment Sites	Use Class	Jobs
12.	Scarborough South - Business Park Expansion	B1/B2/B8	2,500
13.	Scarborough North - Business Park	B1/B2/B8	200

Number	Strategic Retail Development	Use Class	Jobs
14.	Central Scarborough - Comparison Goods - 13,300 sq. m	A1	665

APPENDIX 2

HOUSING AND JOBS GROWTH (SCARBOROUGH AREA VIEW)


ROGER TYM & PARTNERS Planners and Development Economists
Jobs and Housing Growth in Scarborough
IMPORTANT: Information on this map is in no way prejudicial to future planning decisions in relation to scale or location.
Number | Housing Development | Housing Growth Needing Additional Infrastructure | Planned Start and End Dates
1. Scarborough North - Scalby Area 1,320 Start 2012 End 2026
2. Scarborough - Central & other north 550 Start 2011 End 2020
3. South Scarborough: Middle Deepdale (current allocation) 1,200 Start 2012 End 2022
4. South Scarborough: North Middle Deepdale 800 Start 2021 End 2026
5. South Scarborough: South Cayton 3,000 Start 2016 End 2026
6. South Scarborough: other 150 Start 2016 End 2020
7. Filey and Hunmanby 225 Start 2011 End 2020
8. Northern Villages 125 Start 2011 End 2015
9. Western Villages 200 Start 2011 End 2020
10. Southern Villages 100 Start 2011 End 2015
Newby
Everley
Scarborough
East Ayton
Crossgates
Cayton Bay
Cayton
Snainton
Flixton
Filey
Primrose Valley
Hunmanby
Reight
Number | Strategic Employment Sites | Use Class | Jobs
12. Scarborough South - Business Park Expansion B1/B2/B8 2,500
13. Scarborough North - Business Park B1/B2/B8 200
Number | Strategic Retail Development | Use Class | Jobs
14. Central Scarborough - Comparison Goods - 13,300 sq. m A1 665
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APPENDIX 3

HOUSING TRAJECTORIES (PRE-REVISION)

Housing growth trajectory (showing planning permissions separately)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024/25	2025/26	Housing units yet to be built 09-26
		2006/11-					2011-16					2016-21					2021-26					
Scarborough - Scalby Area (A)							0	50	100	100	100	100	100	50	100	150	150	100	100	70	50	1320
pp's						5	10	10	8													33
Scarborough - Central & other north							90	90	90	90	90	20	20	20	20	20	0	0	0	0	0	550
pp's						80	150	150	150	112												642
South Scarborough: Middle Deepdale (B)							0	50	100	150	150	150	150	120	120	100	75	35				1200
South Scarborough: North Middle Deepdale (C)							0	0	0	0	0	0	0	0	0	0	160	160	160	160	160	800
South Scarborough: South Cayton (D)							0	0	0	0	0	300	300	300	300	300	300	300	300	300	300	3000
South Scarborough: other							0	0	0	0	0	30	30	30	30	30	0	0	0	0	0	150
pp's						2	4	2														8
Filey and Hunmanby							25	25	25	25	25	20	20	20	20	20	0	0	0	0	0	225
pp's						10	20	20	11	50	60	75	60	55								361
Northern Villages							25	25	25	25	25	0	0	0	0	0	0	0	0	0	0	125
pp's						5	10	10	5													30
Western Villages							10	10	10	10	10	30	30	30	30	30	0	0	0	0	0	200
pp's						5	10	10	6													31
Southern Villages							20	20	20	20	20	0	0	0	0	0	0	0	0	0	0	100
pp's						5	15	15	4													39
Whitby							48	48	48	48	48	35	35	35	35	35	0	0	0	0	0	415
pp's						40	100	100	100	100												440
Total without planning permissions						0	218	268	318	318	318	535	535	485	535	585	610	560	560	530	510	6885
Total without planning permission but agreement imminent						0	0	50	100	150	150	150	150	120	120	100	75	35	0	0	0	1200
Total planning permissions						152	319	317	284	262	60	75	60	55	0	0	0	0	0	0	0	1584
GRAND TOTAL						152	537	635	702	730	528	760	745	660	655	685	685	595	560	530	510	9669

Source: SBC. See paragraph 3.8 for an explanation of how Scarborough Borough Council have updated these numbers subsequent to our study period.

APPENDIX 4

AREAS SERVED BY NEDL ELECTRICITY SUB-STATIONS

Figure A4.1 -Area supplied by Scarborough Primary Substation (light red)

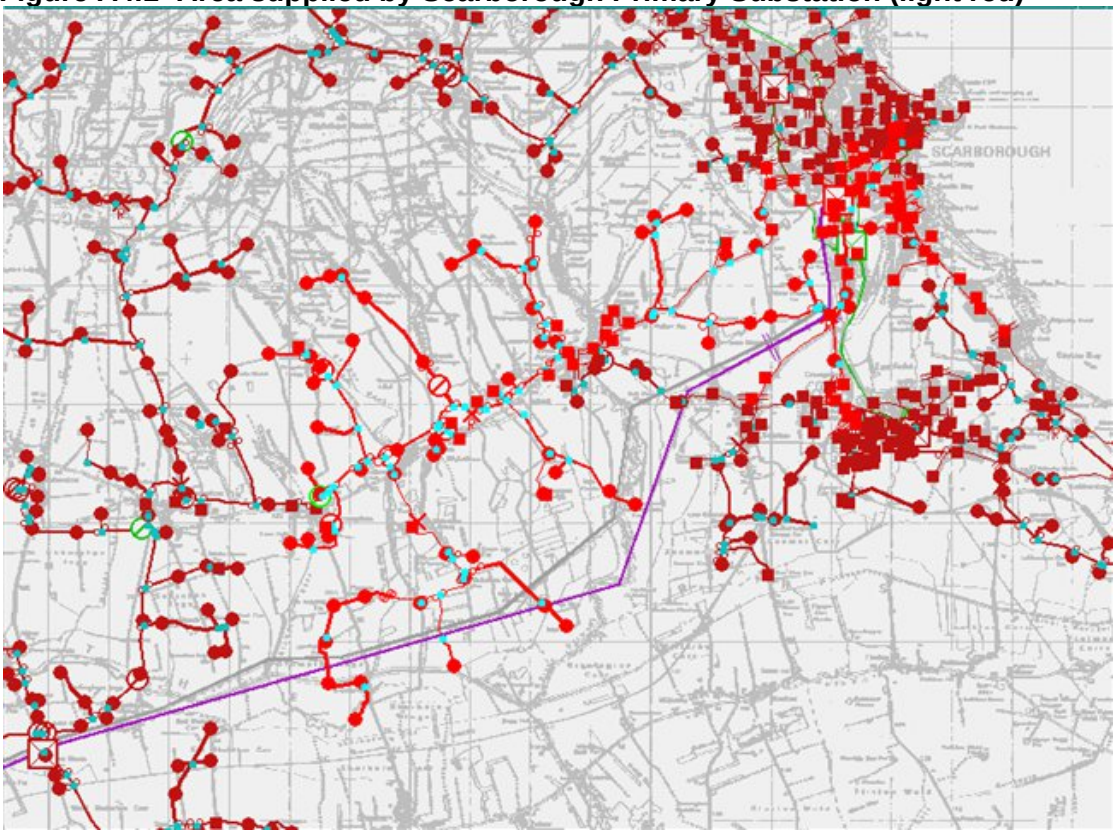


Figure A4.2 - Area Supplied by North Street Primary Substation (light red)

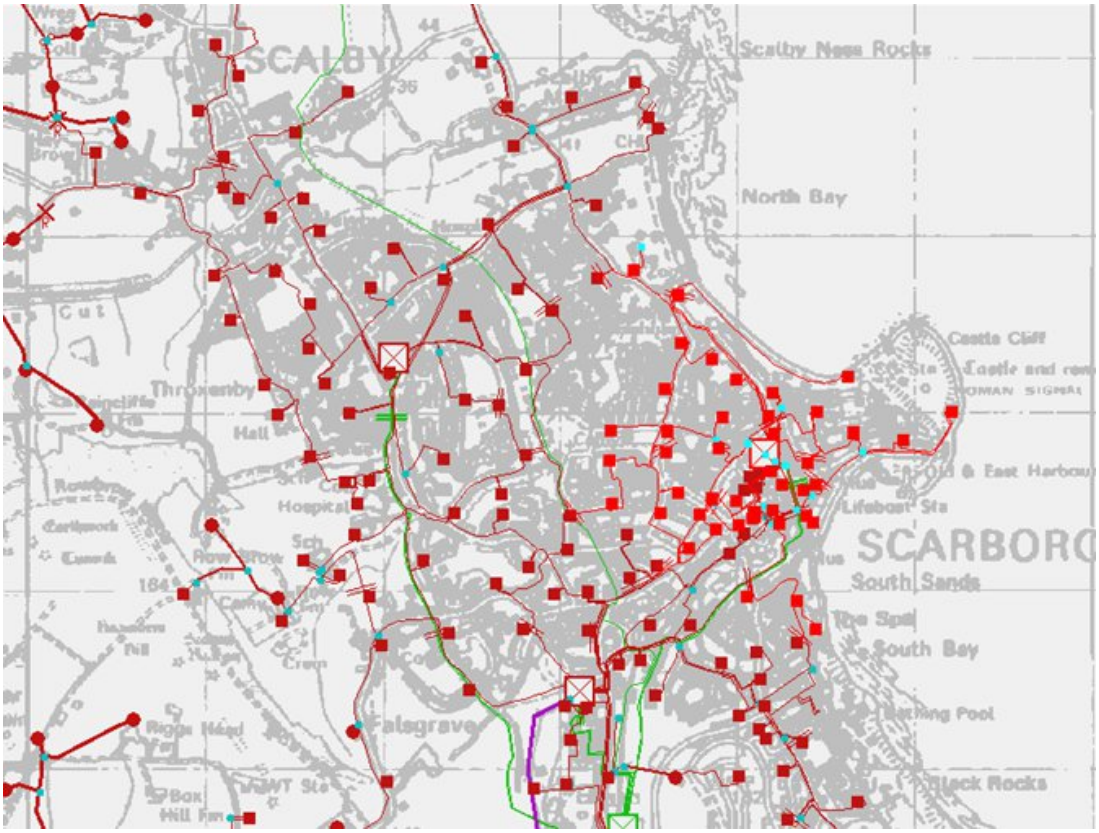


Figure A4.3 - Area Supplied by Ravenscar Primary Substation (light red)

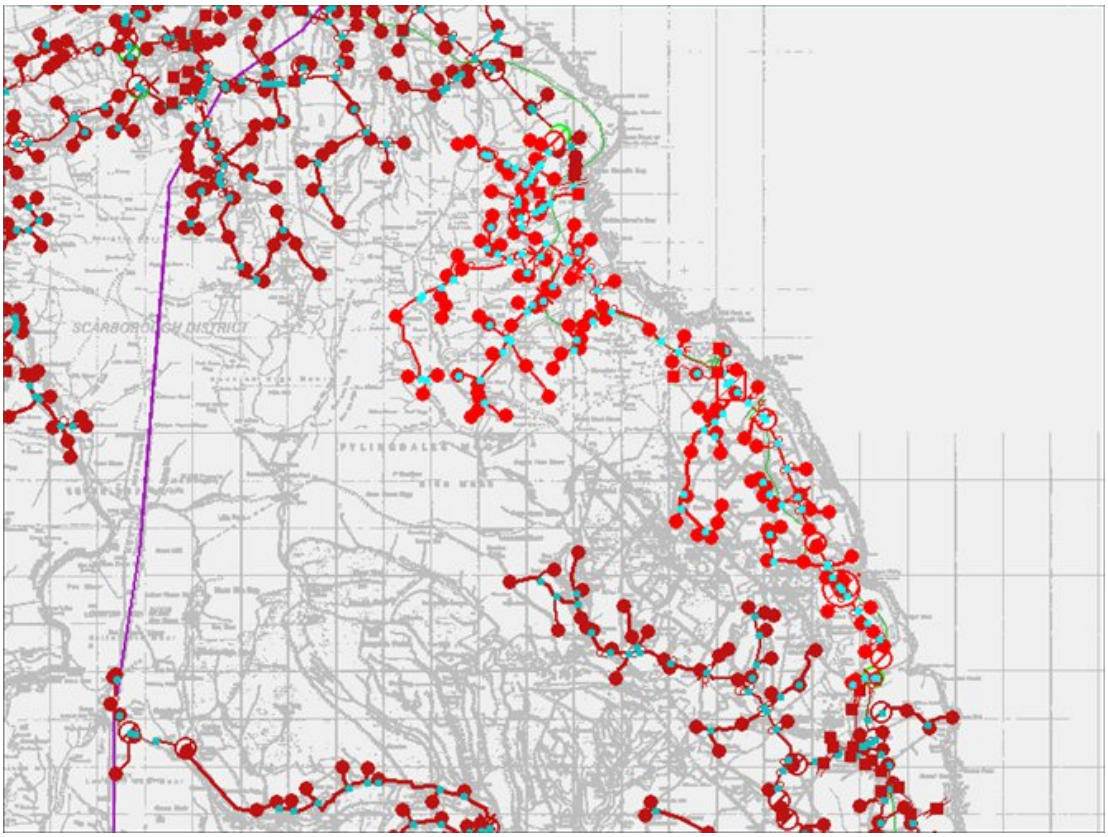


Figure A4.4 - Area supplied by Whitby Primary Substation (light red)

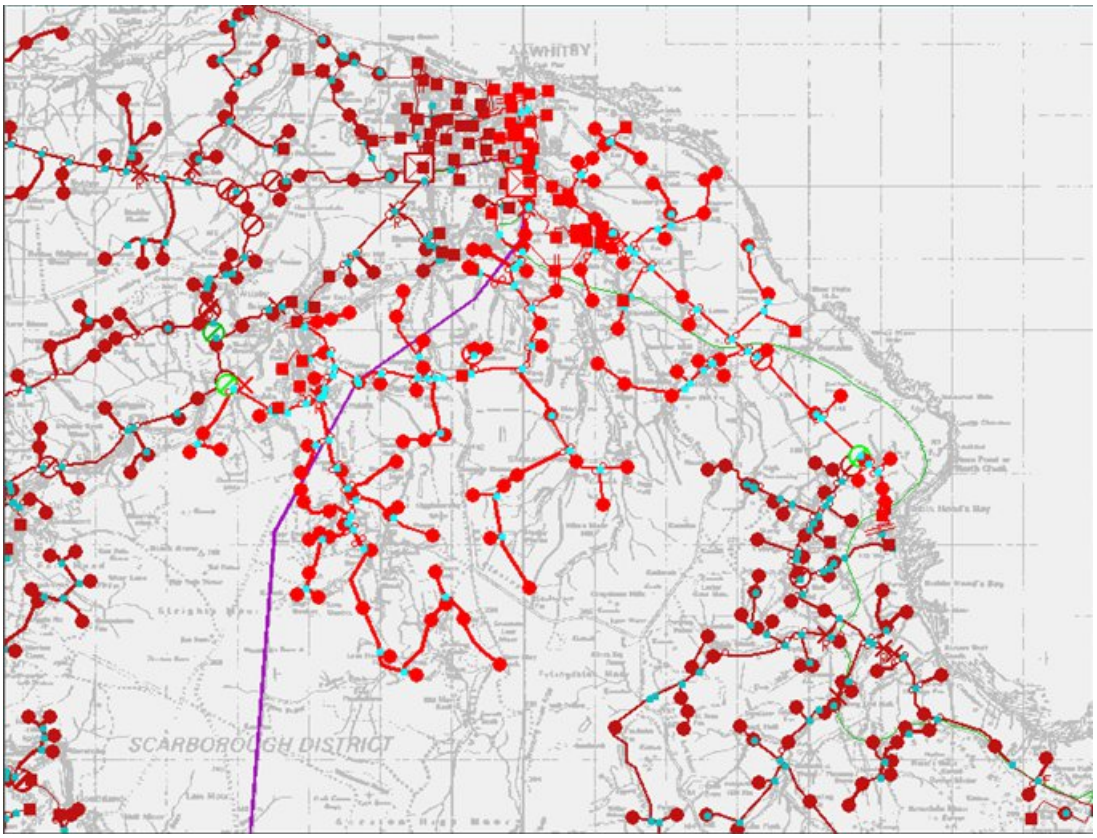


Figure A4.5 - Area Supplied by Whitby West Primary Substation (light red)

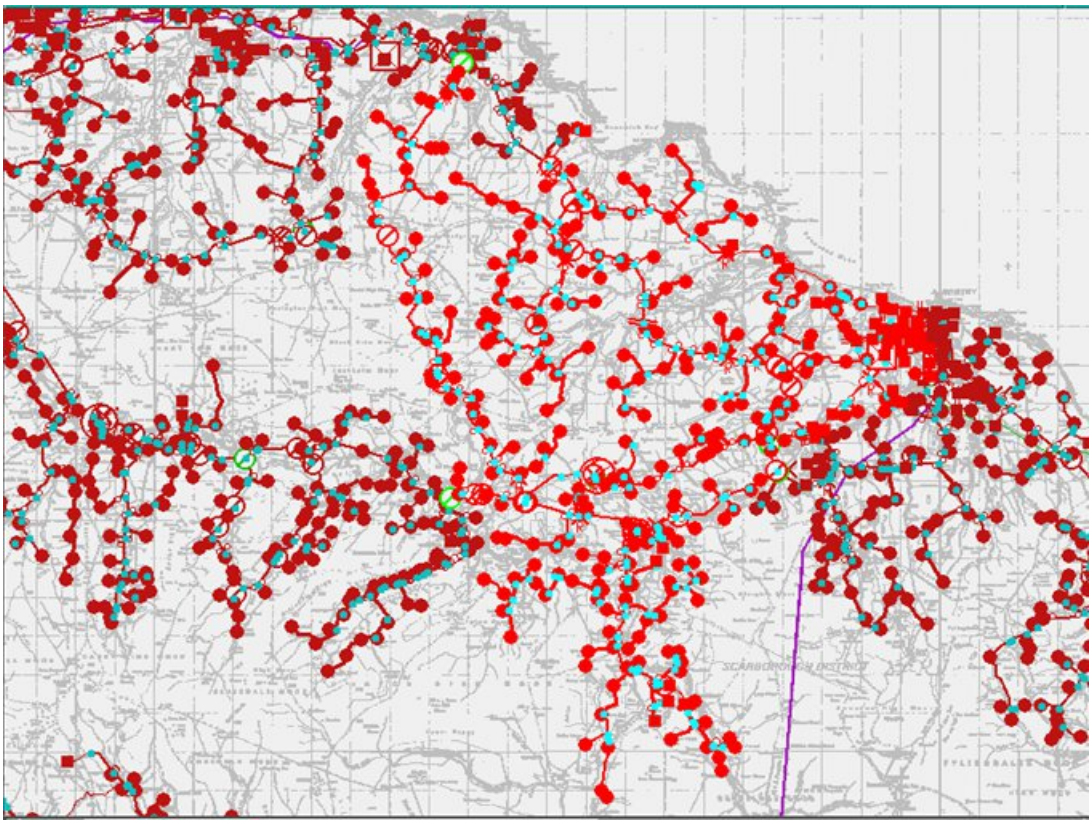


Figure A4.6 - Area supplied by Newby Primary substation (light red)

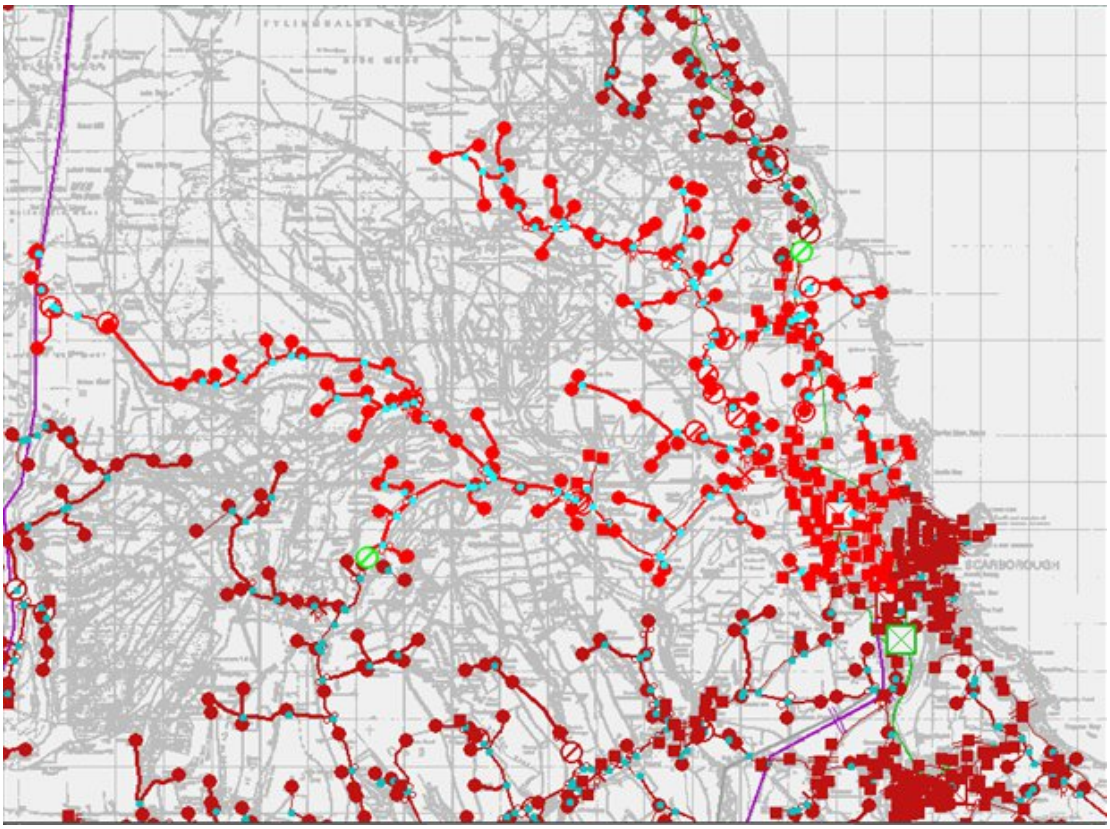
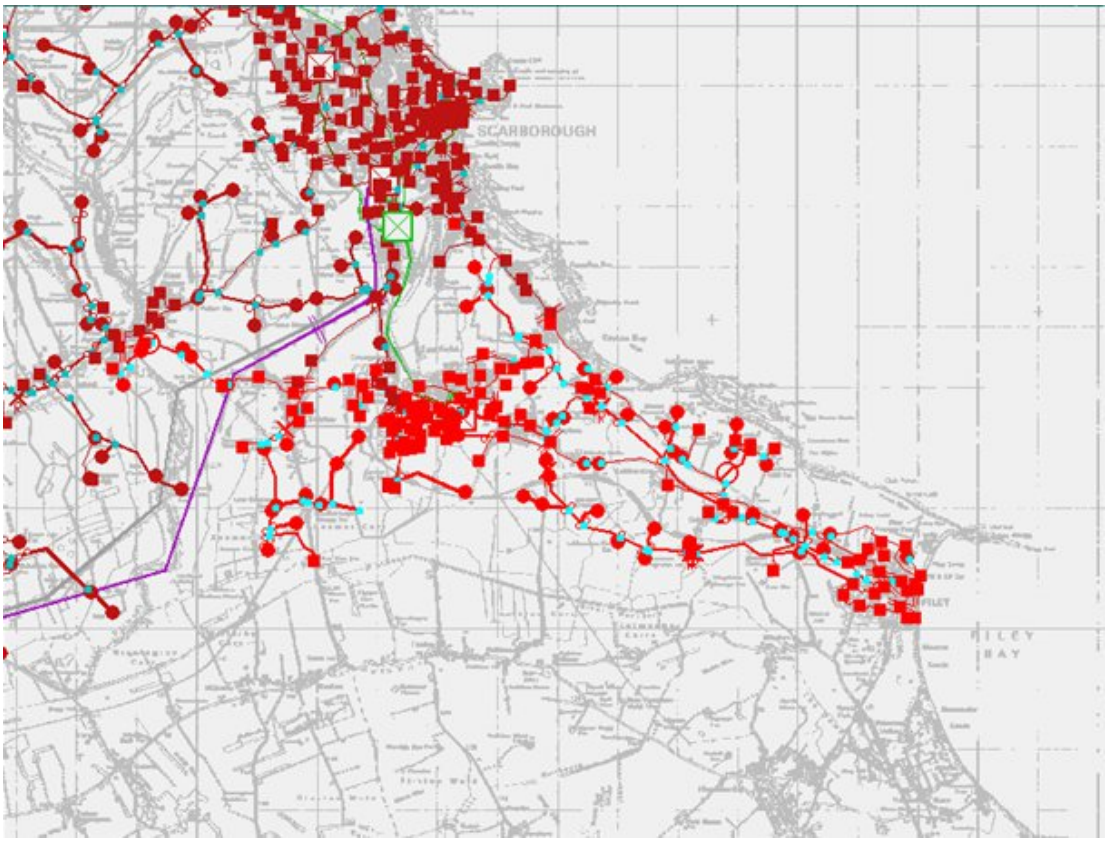


Figure A4.7 - Area supplied by Eastfield primary substation



APPENDIX 5

AREAS SERVED BY YEDL ELECTRICITY SUB-STATIONS

Figure A5.1 - Area supplied by Hunmanby primary substation

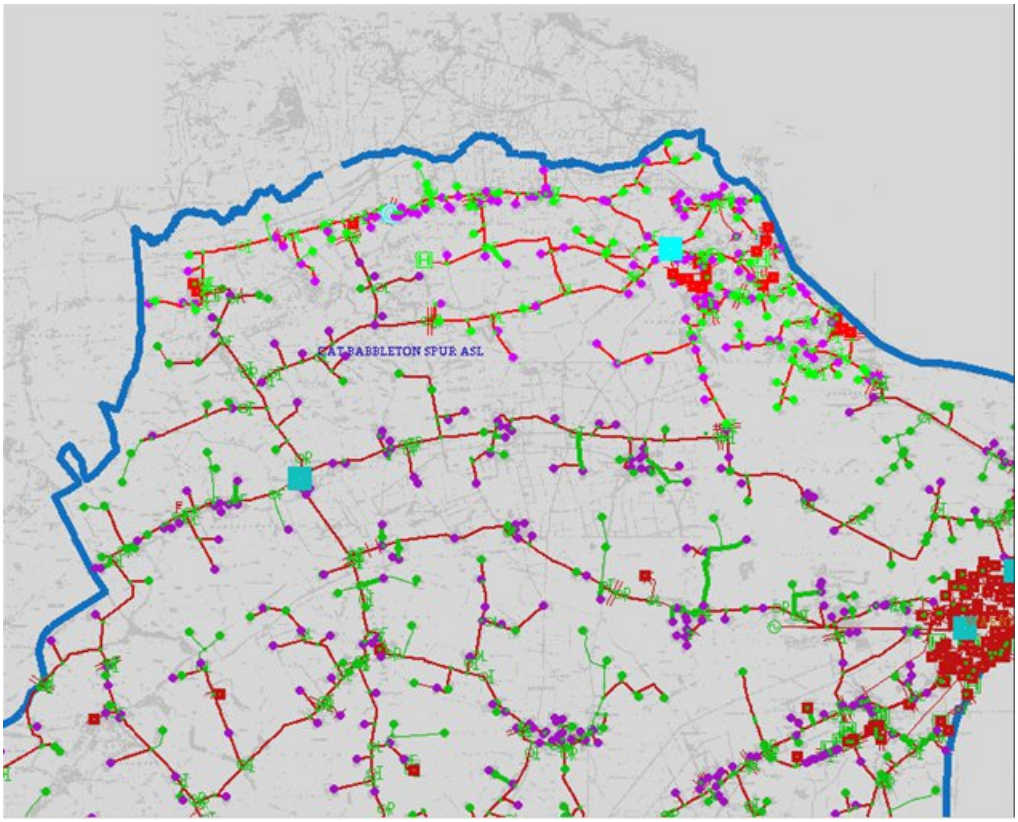


Figure A5.2 - Area supplied by Butterwick primary substation