

Engineering Justification Paper

Biodiversity

Final Version

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2 Introduction

Biodiversity is the variety of life found on earth. It includes all species of plants and animals, their abundance and genetic diversity. Biodiversity underpins our lives and livelihoods and supports the functioning and resilience of ecosystems.

Our economy, health and well-being depend on healthy resilient ecosystems. The decline of biodiversity in our ecosystems has been highlighted more and more in recent years. Where biodiversity is lost it affects the capacity of an ecosystem to adapt to changes and disturbance decreasing its resilience.

We can play our part in reversing the loss of biodiversity by committing land in our company portfolios to biodiversity enhancement projects that will improve ecosystem resilience.

The aim of the work stream is to establish the existing biodiversity profile on these parcels of land through a series of surveys and where appropriate, implement enhancement programmes to increase the biodiversity of the ecosystems existing on them.

The aim of the work stream can be achieved through delivering the following objectives:

1. Understand the existing biodiversity profile across the identified land parcels;
2. Safeguard species and habitats of principal importance and improve their management;
3. Increase the resilience of our natural environment by restoring degraded habitats and creating new habitats; and
4. Improve our evidence, understanding and monitoring of biodiversity.

We have not set any long-term targets beyond GD2 as this programme proposes to survey all site that SGN manage and are in control of. The outputs of the surveys will inform the development of a long term strategy for GD2 and beyond on Biodiversity.

3 Equipment Summary

The SGN asset involved in the work streams described is the land we own that currently exists in an underused state that could be managed to enhance the biodiversity of the local ecosystem the land parcel forms part of.

We have identified 3 key parts of the business that would have suitable opportunities for biodiversity enhancement as part of our works or sites. These are: -

- Land Management
- Property (Occupied sites)
- Major Projects

Land Management

A review of all land parcels registered to Scotland or Southern Gas Networks has been undertaken internally and 97 parcels of land have been identified as potentially being suitable for biodiversity enhancement projects to be developed on them – see **Appendix A**. 47 parcels of land totalling 747,101m² (74.71101 hectares) that are owned by Scotland Gas Networks and 50 parcels of land totalling 418,049m² (41.8049 hectares) owned by Southern Gas Networks are being considered for biodiversity enhancement.

The land parcels central to the work streams identified are those that are outside operational compounds. They typically exist as areas of low-quality early succession vegetation consisting of dense scrub and self-seeded trees. There are some sites where there are more established woodlands, however these are the exception.

Property (Occupied Sites)

We have 44 occupied sites across our Property estate – see Appendix B. We intend to carry out biodiversity assessment surveys on these sites to see what improvement measures could be implemented. Some sites may have minimal enhancement opportunities, but this is not known in detail at this stage. A list of Property sites is available in **Appendix B**.

Major Projects

Reviewing the planned projects in GD2 for Major Projects in Scotland highlighted 6 x PRS projects which are likely to be suitable for biodiversity improvement measures – see **Appendix C**. The Southern site review was not completed in time for this submission, however we are committed to delivering the same number of Major Project sites.

4 Problem Statement

Why are we doing this work and what happens if we do nothing?

In their current condition these sites are low on biodiversity, if we do nothing, the land parcels, properties & major projects will continue to be managed from a health and safety compliance perspective only and the opportunity for management practices to be considerate of biodiversity enhancement and ecosystem resilience will be much diminished, if not lost altogether.

What is the outcome we want to achieve?

We want to manage these parcels of land, properties and major projects with a view to enhancing biodiversity and improving local ecosystem resilience through incorporating the following factors into their management:

- Species diversity - more diverse ecosystems are more resilient to external influences and their impacts.
- Improve connectivity - within and between ecosystems serves to increase biodiversity.
- Improve scale and extent – the further an ecosystem extends without fragmentation the more resilient it is likely to be and the greater the biodiversity that can be found
- Improve condition – ecosystems need to be healthy to function effectively
- Adaptability – ecosystems are not static and change over time along with their biodiversity.

These factors can be instilled in opportunities to help enhance biodiversity such as:

- Planting native species, wildflower areas for pollinators, leaving areas of unmown grass; and improving connectivity between valuable habitats.
- Safeguarding protected species, habitats and areas.
- Restoring habitats to as natural and resilient state as possible.
- Supporting the creation of new habitats, such as local orchards, native hedges, wildflower meadows
- Providing areas of wildlife-friendly green space that is accessible to local communities.

How will we understand if the spend has been successful?

We intend to use a natural capital tool (Defra Biodiversity Metric 2.0) which allows us to monitor the provision of ecosystem services from our sites and report on progress as necessary. We will use the natural capital tool before and after biodiversity enhancement works have taken place, so we can understand the success of the measures.

We will set out the governance arrangements for each enhancement project to ensure that we deliver the biodiversity commitments defined as part of each parcel of lands biodiversity improvement strategy and report our progress against this. Primarily this will be through follow-up biodiversity classification surveys once the enhancement measures have been implemented.

4.1 Narrative Real-Life Example of Problem

Parcels of non-operational land are currently managed from the point of view of health and safety compliance. This typically results in everything other than mature trees being reduced to ground level and a programme of strimming and weed killing being implemented throughout the year to keep on top of new vegetation growth.

Safety benefits are the key focus of the total clearance approach. By removing all vegetation, you reduce the possibility of slips, trips and falls on low level branches and stems and the possibility of becoming entangled or being scraped by head high vegetation. You are also able to inspect the full length of boundary security fencing for defects and remove hiding places that trespassers may otherwise look to exploit.

Whilst this appears at odds with the work streams being promoted, at present the vegetation that exists across the land parcels identified appears to be self-seeded and has a low biodiversity in terms of number of species; being restricted to early succession species and invasive weeds. Only the introduction of targeted management practice are likely to greatly enhance the existing biodiversity of these parcels of land.

The photographs below provide before and after examples of how sites are currently managed:

Site 1 – before and after



Site 2 – before and after



As shown, the current management of land is in line with safety aspects which does not encourage biodiversity. We currently do not have a tool to measure the existing impact on our land and this is a part of this proposal for GD2, to understand and be able to quantify improvements.

4.2 Spend Boundaries

The focus of this paper is to obtain funding for feasibility studies to explore the opportunities that exist to enhance biodiversity, as well as the scale of those opportunities on Land Management, Major Projects and Occupied sites.

Retrofitting biodiversity enhancement measures to existing operational sites have previously been discounted by the GD2 team due to large uncertainties in cost without further investigation. These have not been considered further here but there is potential to look at these measures in future.

Avoided costs from grounds maintenance have not been considered here but will be investigated when we provide the detail for the biodiversity enhancement remedial costs.

Approximate costs for implementing enhancement works have been provided, however these haven't been subject to CBA as we are not currently in a position to understand the extent of the works on the sites or the societal benefits that these may bring. If using a traditional CBA tool, it will be hard to demonstrate the benefits of biodiversity enhancement which is largely societal and environmental, not financial. A measure will need to be agreed for 'costing nature' if the CBA is to add up. We are proposing a "use it or lose it pot" for a number of our EAP initiatives and propose to

include biodiversity enhancement measures on the selected sites after the surveys have been completed.

We have not set any longer-term targets beyond GD2 as this programme proposes to survey all sites that SGN manage and are in control of and we currently do not have the data available to what extent natural capital would increase after any enhancements are carried out.

5 Probability of Failure

Current management practices of the land parcels identified do not take into consideration the promotion or enhancement of biodiversity. The opportunity has presented itself to make biodiversity enhancement a central theme in the management of this land.

In order to do this, we need to inform the delivery of our management practices by better understanding the ecology and science of the ecosystems on our land parcels and the status and trends in the biodiversity already present before deciding on what measures to be implemented on which site. This approach is seen as critical so as not to cause unintentional harm to existing ecosystems.

5.1 Probability of Failure Data Assurance

From the initial survey and strategy work proposed in section 7 below, it may be that some of the parcels of land identified are existing in an already optimal manner and that efforts to further enhance the diversity may damage the existing local ecosystem and therefore some of the sites identified may not be suitable for enhancement projects. On other land parcels, this may not be the case and they would benefit from biodiversity enhancement.

6 Consequence of Failure

Failure in this respect is considered to be not taking the opportunity to implement biodiversity enhance projects on the sites identified. In doing so, the following impacts could be felt.

Society

Biodiversity has its own intrinsic value and we have a moral obligation to protect it and prevent any further loss and where possible to enhance it to ensure that it has lasting benefits for society. This is something that is often raised by external stakeholder groups.

Economic

The natural world, its biodiversity and its constituent ecosystems are critically important to our well-being and economic prosperity but are consistently undervalued in conventional economic analyses and decision making.

Relying on a cost benefit analysis model to place a value on biodiversity and make decision on the viability of this work stream may not be most appropriate means of assessing feasibility.

Environmental

The sites will continue to be managed from a health, safety and environmental compliance point of view, ensuring that they are secure from trespass and that people will not experience harm in visiting the sites.

However, not progressing with the proposed work streams could be considered a missed opportunity to enhance biodiversity and improve the resilience of the ecosystems on the parcels of land we own.

Legal

The Nature Conservation (Scotland) Act 2004 requires all public bodies in Scotland, including statutory undertakers, to further the conservation of biodiversity when going about their daily business. The Wildlife and Natural Environment (Scotland) Act 2011 also requires public bodies in Scotland to provide a publicly available report every three years on the actions they've taken to meet this biodiversity responsibility.

No similar legislation existing for England, however the Wildlife and Countryside Act 1981 and our related Biodiversity strategy also details the need to enhance biodiversity, halt its loss and raise awareness.

The work streams proposed will provide significant contribution to our responsibilities under this legislation.

7 Options Considered

The options that have been considered is based on the number of projects that we are committed to undertake for all Land Management, Property (Occupied sites) and Major Project sites: -

1. Do nothing
2. 25% of land parcels
3. 50% of land parcels
4. 100% of land parcels

The following is the process that we envisage needing to be undertaken for each site that is being considered for a biodiversity enhancement project.

Phase 1 Habitat Survey

This is the initial assessment of the site where the baseline ecology is assessed as well as the potential for species to use the site for refuge, foraging, feeding, etc. This will also look at historic records and records of animals and plants in the local area and the council or regional targets to improve biodiversity which will inform the best approach for improvement for specific species or for the site overall.

Species Specific Survey

This will be targeted based on a combination of what is found during the phase 1 habitat survey, what could potentially be using the site and potential key species for biodiversity. This could be an extensive list therefore it is recommended that a limited number of target species is identified, and improvement measures based around those to which impact could be the greatest or could have a net benefit to the site overall. I.e. improving a habitat that could support multiple different species rather than installing nest boxes just for birds. The main thing to note for these assessments is that they are time-sensitive, and some surveys can only be conducted at certain times of the year.

Improvement Strategy

This will be dictated by which species are being targeted for improvement. Some general methods for biodiversity improvement may be implemented at certain sites with no particular species aim, such as limiting unnecessary ground maintenance, limiting outdoor light use, allowing fallen trees/branches to remain onsite. Other hard engineering strategies can involve methods such as; pond creation, installing bat/bird boxes, creating reptile refugia, installing hedgehog boxes etc. Some soft engineering strategies may include; wildflower seed spreading, tree planting, hedgerow improvements etc.

Implementation of Selected Strategy

The most appropriate enhancement project from the options considered in the Improvement Strategy will be selected and implemented.

Monitoring

Use natural capital tool to compare existing site with site following biodiversity improvement measures. This may involve using defined targets for each site the monitoring will depend on the biodiversity improvement plans. We will achieve a minimum of 'No Net Loss' and support the EU Biodiversity Strategy with our aim being focused on Biodiversity 'Net Gain'.

Specific species may require additional surveys to count improvements and this may be in a single visit or across each year to monitor improvements during each season. It may be that the monitoring can take place within the first year or it may be limited to sometime after the mitigation has taken place. Monitoring should be consistent in timings year on year to show specific comparable changes. There should be reporting carried out for each site each year using a standardised template to allow measurements of changes against the baseline.

7.1 Options Summary

An initial survey and strategy development cost of £10,000 per site has been included. This is based on an average site, some sites may be lower or higher depending on complexity, location and site size. Whilst all surveys listed below in **Table 1**, total approximately £20,000 they would only be required if a site had all species identified, examples in **Table 2**. This is considered to be highly unlikely. It is envisaged that many sites will only require Phase1 Habitat Surveys and a National Vegetation Classification Survey to be able to identify their suitability.

Table 1: Survey costs

Item	Price per site
Phase 1 Habitat Survey	£1,800
National Vegetation Classification Survey	£1,500
Tree survey	£750
Non-native Invasive Species Survey	£1,200
Badger Survey	£600
Bat Roost Survey	£600
Bat Emergence Survey	£1,200
VP bird survey – 1 Season	£3,000
Dormouse Survey (Apr – Nov)	£4,500
Otter survey	£900
Reptile Survey	£3,000
Water Vole Survey	£900

Table 2: Species specific costs

Item	Unit cost
Bat Boxes	£75 per box + labour
Bird Boxes	£45 per box + labour
Hedgehog Boxes	£150 per box + Labour
Refugia Creation	£600
Tree planting	£1,500*
Wild seed mix	£100 per acre

Note: This is an average cost for tree planting for a site. Tree numbers, type and cost will vary on a site by site basis.

Labour and civil engineering costs would need to be assessed on a site by site basis and would be dependent on the size and complexity of the projects being implemented.

Table 3 below provides a summary of work and cost for each option.

Table 3: Options cost summary

Options	Description	Number of sites	Costs £m
1	Do nothing	0	0
2	25% of land parcels	39	2.667
3	50% of land parcels	77	3.294
4	100% of land parcels	153	4.510

We will look to implement biodiversity enhancement measures as recommended by the site surveys. The recommended enhancement measures may be simple or complex depending on the site. For the Option 4 'High Ambition Scenario' we would carry out surveys at all of the 153 selected sites and then determine the most suitable biodiversity improvement strategy and measures for each site.

After the implementation of measures, we would carry out monitoring to assess the impact. We propose a full-time equivalent role for a biodiversity manager to manage these projects from implementation to monitoring and continual improvement.

7.2 Options Technical Summary

A technical breakdown of options 2, 3 and 4 is detailed in **Tables 4-6** below. The options are categorised by the three business areas (Land Management, Occupied Property and Major Projects) and provide costs per percentage of land parcel.

Land Management biodiversity costs

97 site (100%) 49 sites (50%) 25 sites (25%)

Table 4: Option 2 breakdown

Item	Option 2 25% of land	Option 3 50% of land	Option 4 100% of land
Upfront Opex allowance			
Undertake surveys incl. Phase 1 Habitat, Species Specific and Biodiversity	0.970	0.970	0.970
Develop Biodiversity Improvement Strategy	0.243	0.243	0.243
Sub-total Opex “upfront”	1.213	1.213	1.213
Proposed Capex “use it or lose it” allowance			
Implement Biodiversity Enhancement Measures	0.375	0.735	1.417
Resurvey biodiversity to monitor success of enhancement measures.	0.037	0.074	0.146
Sub-total Capex “use it or lose it”	0.412	0.809	1.563
Total £m	1.625	2.022	2.776

Occupied sites biodiversity costs

44 sites (100%) 22 sites (50%) 11 sites (25%)

Table 5: Option 3 breakdown

Item	Option 2 25% of land	Option 3 50% of land	Option 4 100% of land
Upfront Opex allowance			
Undertake surveys incl. Phase 1 Habitat, Species Specific and Biodiversity	0.550	0.550	0.550
Develop Biodiversity Improvement Strategy	0.110	0.110	0.110
Sub-total Opex “upfront”	0.660	0.660	0.660
Proposed Capex “use it or lose it” allowance			
Implement Biodiversity Enhancement Measures	0.165	0.330	0.660
Resurvey biodiversity to monitor success of enhancement measures.	0.017	0.033	0.066
Sub-total Capex “use it or lose it”	0.182	0.363	0.726
Total £m	0.842	1.023	1.386

Major Projects biodiversity costs

12 sites (100%) 6 sites (50%) 3 sites (25%)

Table 6: Option 4 breakdown

Item	Option 2 25% of land	Option 3 50% of land	Option 4 100% of land
Upfront Opex allowance			
Undertake surveys incl. Phase 1 Habitat, Species Specific and Biodiversity	0.120	0.120	0.120
Develop Biodiversity Improvement Strategy	0.030	0.030	0.030
Sub-total Opex “upfront”	0.150	0.150	0.150
Proposed Capex “use it or lose it” allowance			
Implement Biodiversity Enhancement Measures	0.045	0.090	0.180
Resurvey biodiversity to monitor success of enhancement measures.	0.005	0.009	0.018
Sub-total Capex “use it or lose it”	0.050	0.099	0.198
Total £m	0.200	0.249	0.348

7.3 Options Costs Summary Table

Table 7 provides a cost summary table for both opex and capex costs and the total volume of work proposed for each option.

Table 7: Cost summary of all options
153 sites (100%) 77 sites (50%) 39 sites (25%)

Item	Option 2 25% of land	Option 3 50% of land	Option 4 100% of land
Upfront Opex allowance			
Undertake surveys incl. Phase 1 Habitat, Species Specific and Biodiversity	1.640	1.640	1.640
Develop Biodiversity Improvement Strategy	0.383	0.383	0.383
Sub-total Opex “upfront”	2.023	2.023	2.023
Proposed Capex “use it or lose it” allowance			
Implement Biodiversity Enhancement Measures	0.585	1.155	2.257
Resurvey biodiversity to monitor success of enhancement measures.	0.059	0.116	0.230
Sub-total Capex “use it or lose it”	0.644	1.271	2.487
Total £m	2.667	3.294	4.510

8 Business Case Outline and Discussion

The most suitable biodiversity enhancement measures to be implemented on which parcel of land is not currently known and surveys and the development of improvement strategies for each site would have to be undertaken in years one and two of the RIIO-2 control to enable this to be established. All options considered require these works to be undertaken so as to establish the biodiversity profile as a baseline from which to identify potential enhancement projects to implement.

The surveys and improvement strategies will enable the identification of the most appropriate measures to be adopted at each site and the implementation of these would follow in years three and four. The uncertainty around the options being implemented and the possibility of third-party funding through organisations such as the Woodland Trust and local Wildlife Trusts means that a figure for implementing these measures has been estimated.

An estimated figure per land parcel for undertaking works has been provided based on the findings of an example Biodiversity Enhancement Strategy. The preferred option is to undertake enhancement work across all parcels of land, however this is on a “use it or lose it” basis as it is not currently known on how many sites it will be feasible to undertake such works.

A programme of resurveying the biodiversity on the land parcels targeted by the enhancement measures would allow the enhancements in biodiversity to be measured and our knowledge and understanding to be used in continuing to manage the projects, as well as identify new opportunities and set up new projects.

Approximate costs are provided for implementing enhancement works, however these haven't been subject to CBA as we are not currently in a position to understand the extent of the works on the sites or the societal benefits that these may bring.

Instead we looked at the implementation of enhancement projects on a 25% of land parcels, 50% of land parcels or 100% of land parcels. We felt that funding should be applied for all sites as until we know the understanding of the feasibility work and the opportunities available, anything less may mean that some highly beneficial projects may not be able to be implemented due to a funding shortfall.

8.1 Key Business Case Drivers Description

The key business case driver is that surveying and implementation of enhancements for 100% of the sites identified would give SGN the knowledge and understanding of what impact each site would have on Biodiversity and the ability to target sites with the biggest impact anything less than 100% of sites does not give SGN this knowledge and understanding.

8.2 Business Case Summary

The key value drivers for each option are detailed in **Table 8** below.

Table 8: Key business case drivers

Option	Description	Key Value Drivers
1	Do nothing	Lowest cost option where SGN would continue to manage their land with little/no benefit to biodiversity.
2	25% of land parcels	Nominal value chosen to show possible investment options as extent to which biodiversity can be enhanced is not fully understood at this time. However, requesting funding for anything less than 100% of the sites risks sites where enhancements could be made falling outside of the programme.
3	50% of land parcels	Nominal value chosen to show possible investment options as extent to which biodiversity can be enhanced is not fully understood at this time. However, requesting funding for anything less than 100% of the sites risks sites where enhancements could be made falling outside of the programme.
4	100% of land parcels	The preferred option; to undertake enhancement work across all parcels of land, however this is on a “use it or lose it” basis so that value is provided to the customer through Ofgem’s uncertainty mechanism.

9 Preferred Option Scope and Project Plan

9.1 Preferred Options

Option 4 (100% of land parcels on Land Management, Occupied Property and Major Project sites) is the preferred biodiversity enhancement option. We will seek to implement biodiversity enhancement measures as recommended by the site surveys. The recommended enhancement measures may be simple or complex depending on the site. Option 4 is our high ambition scenario and in-line with stakeholder feedback. We will carry out surveys at all of the 153 selected sites and then determine the most suitable biodiversity improvement strategy and measures for each site. After the implementation of measures, we would carry out monitoring to assess the impact. We propose a full-time equivalent role for a biodiversity manager to manage these projects from implementation to monitoring and continual improvement.

9.2 Asset Health Spend Profile

The gross costs including efficiencies requested for biodiversity enhancement works in RIIO-GD2 is **£4.510m**

The breakdown of costs is provided in the **Table 9**.

Table 9: GD2 spend profile

Activity	2021/22 £m	2022/23 £m	2023/24 £m	2024/25 £m	2025/26 £m	Total £m
Opex	2.023	0	0	0	0	2.023
<ul style="list-style-type: none"> Undertake surveys incl. Phase 1 Habitat, Species Specific and Biodiversity Develop Biodiversity Improvement Strategy 						
Capex	0	0.376	0.946	0.941	0.224	2.487
<ul style="list-style-type: none"> Implement Biodiversity Enhancement Measures Resurvey biodiversity to monitor success of enhancement measures. 						
Sub Total	2.023	0.376	0.946	0.941	0.224	4.510

9.3 Investment Risk Discussion – The Uncertainty Mechanism

We are proposing to use Ofgem’s criteria to account for uncertainty by using their ‘use it or lose it’ mechanism in GD2. Our justification for this is as follows: -

What is the issue/risk that the proposed mechanism addresses?

The uncertainty around the existing ecosystems and biodiversity of our sites is currently unknown as we have no data to understand the existing level of biodiversity across any of our sites. Existing site conditions will influence whether a biodiversity enhancement project is viable, as well as the scale of any such project.

Where does the ownership of risk lie in relation to the uncertainty?

The ownership of risk lies with the customer in the necessity to fund surveys to understand the biodiversity enhancement opportunities that exist on our sites. We will minimise the risk to the

customer by using the mechanism, as this will allow us to only use funding where it is feasible to implement projects.

Through the stakeholder engagement activities undertaken around the Environmental Action Plan, it is believed that the level of risk (funding requirement) we are exposing the customer to is proportional to the potential advantage that could be gained through the proposed works.

Materiality of issue

As detailed throughout this paper estimated costs have been provided in respect of the funding required to implement the biodiversity enhancement projects. In addition to implementing the project, funding will also be required to monitor success of enhancement measures implemented.

Frequency and probability of issue over the price control period

The Governments 25 Year Environmental Plan places strong emphasis on land owners increasing natural capital on their sites through the way they manage land. This plan was introduced in 2018 and will transcend the GD2 period.

As a government funded organisation, we should look to follow this example and seek to enhance biodiversity on our sites wherever possible.

What is the proposed mechanism?

We are proposing the use of the “use it or lose it” mechanism to provide funding of **£2.487m** to carry out biodiversity enhancement projects, which will follow on from the Phase 1 Habitat Surveys, Species Specific Surveys and Biodiversity Improvement Strategies that will already have been funded.

Upon completion of these surveys and strategies at individual sites, we will understand the costs involved to implement projects that are identified as feasible. We will seek approval from Ofgem for any proposed expenditure and any unused portion of the mechanisms funding will be return to customers.

What are the justifications for the mechanism?

The mechanism will allow us to better understand how many of the sites we have identified are actually feasible for implementing biodiversity enhancement projects on them.

What are the drawbacks of the proposed mechanism?

There is an element of uncertainty in the number of sites where biodiversity enhancement projects are feasible. However, it is estimated that some sort of project will be able to be undertaken on almost all sites. The scale of the projects is likely to be the biggest determining factor in the cost of implementing the projects.

Can the drawbacks be reduced?

The drawbacks of high uncertainty are inherent with managing our portfolio to promote biodiversity. There is little way to understand the biodiversity across the sites without undertaking surveys and developing enhancement strategies for each site. The proposed mechanism reduces risk to the consumer by returning any unused portion of the proposed funding to them.

Explanation of how on balance, the mechanism delivers value for money while protecting the ability to finance efficient delivery.

The adoption of the mechanism is focused predominantly at delivering value for money. It ensures that funding is available to undertake biodiversity projects where they have been demonstrated as being feasible to implement and also allows for any surplus funding to be returned.

Treatment in Business Plan Data Templates (BPDTs)

The costs have been included in the **3.05 (other Capex)** Section of the BPDT.

Appendix A - List of Land Management Sites

Site Name	Title Ref.	Network	Site Area (m2)
BK324399	Aldermaston	Southern	1410
WSX49828	Ansty	Southern	8154
BM142166	Aylesbury	Southern	1329
SY697377	Brockham	Southern	9049
SGL692407	Bromley	Southern	156
HP667854	Chandlers Ford	Southern	16575
ESX63850	Cooden Beach	Southern	3494
ESX177661	Cowbeech	Southern	211
ESX251756	Crowborough	Southern	4074
SY395830	Dorking	Southern	1905
SY156110	East Grinstead	Southern	16273
ESX53496	Eastbourne	Southern	691
HP237737	Eastleigh	Southern	201
HP628139	Farnborough	Southern	1808
SY756108	Farnham	Southern	260
SY761365	Farnham	Southern	39
K319182	Faversham	Southern	966
ON228952	Goring	Southern	1221
SY763348	Guildford	Southern	146
K507341	Hadlow	Southern	479
HT23587	Hastings	Southern	14
ESX341672	Heathfield	Southern	4979
ON93551	Horton cum Studley	Southern	6906
HP599181	Hursley	Southern	829
ON204494	Ipsden	Southern	12124
ON227760	Ipsden	Southern	7433
ON228023	Ipsden	Southern	5179
ESX100027	Lewes	Southern	797
SY401430	Limpsfield	Southern	2777
K357644	Meopham	Southern	1745
K574363	Milton	Southern	45
SGL279975	New Malden	Southern	35

ESX63134	Peacehaven	Southern	404
TGL60685	Plumstead	Southern	488
SY773638	Ripley	Southern	136
K66660	Rochester	Southern	161
IW68446	Shalfleet	Southern	2082
HP627780	Southampton	Southern	8191
WSX256524	Stedham	Southern	1959
BM281135	Steeple Claydon	Southern	3596
BK107810	Steventon	Southern	213
DT304768	Sturminster Newton	Southern	10738
HP669958	Totton	Southern	4421
BM280457	Turville	Southern	13449
SY466232	Warlingham	Southern	130468
SY485426	Warlingham	Southern	39564
SY78939	Warlingham	Southern	74024
DT338183	Wimborne	Southern	1378
HP712030	Winchester	Southern	13196
DT338222	Wootton Fitzpayne	Southern	2277
ABN105580	Ardallie	Scotland	208
ABN62651	Kemnay	Scotland	981
ANG26131	Dundee	Scotland	221
ANG44932	Dundee	Scotland	51
ANG45326	Lunanhead	Scotland	296
ANG48751	Carnoustie	Scotland	82
ANG52150	Arbroath	Scotland	298
ANG61898	Forfar	Scotland	334
ANG62015	Forfar	Scotland	414
ARG12528	Toward	Scotland	426
AYR71098	Beith	Scotland	633
AYR83893	Prestwick	Scotland	193
AYR84953	Longbar	Scotland	1172
AYR85674	Irvine	Scotland	8755
BER2474	Galashiels	Scotland	671
BER5821	Duns	Scotland	1254
BNF36	Road to Buckie	Scotland	882
BNF7184	Cullen	Scotland	171
CTH1	Wick	Scotland	86089

CTH23	Caithness	Scotland	94785
DMB83711	Alexandria	Scotland	147
DMF18326	Annan	Scotland	460
ELN4670	Longniddry	Scotland	1685
ELN6992	Tranent	Scotland	4060
FFE79406	Gauldry	Scotland	599
LAN140789	Mossend	Scotland	2291
LAN198308	Bargeddie	Scotland	321
LAN198709	Lanark	Scotland	706
LAN200414	Glenmavis	Scotland	515907
LAN217951	Carluke	Scotland	545
LAN92706	Clarkston	Scotland	519
MID101901	Ratho	Scotland	973
MID117209	Arniston	Scotland	291
MID130653	Edinburgh	Scotland	137
MID91317	Edinburgh	Scotland	617
REN121724	Eaglesham	Scotland	444
REN122682	Leitchland Road	Scotland	616
REN39635	Greenock	Scotland	653
REN56699	South Erskine Bridge	Scotland	1563
REN61253	Port Glasgow	Scotland	372
REN71677	Newton Mearns	Scotland	2595
ROS2	Conon Bridge	Scotland	4406
SEL2037	Galashiels	Scotland	330
STG57621	Larbert	Scotland	448
WLN40117	Grangemouth	Scotland	6370
WLN6390	Livingston	Scotland	171
FFE59036	Kennoway	Scotland	1959

Appendix B - Property (Occupied Sites)

Site	Size in m ²	Site Size Level	Approx. m ²	Total Sites					
				No.	%				
Walton Park	10,450	Large Sites	4496	5	11%				
Ashford	4,038								
Horley	3,046								
St Mary Cray	2,513								
Edinburgh	2,432								
Epsom	1,956	Medium Sites	948	9	20%				
Aldershot	632								
Provan	2,018								
Paisley	1,020								
Glasgow	717								
Segensworth	795								
Bramshill	411								
Burgess Hill	553								
Redhill	431								
Dumfries	267					Small Sites	168	30	68%
Horsham	357								
Dunfermline	359								
Gillingham	388								
Oban	146								
Thurso	144								
Wick	143								
Reading	144								
Stornoway	93								
Inverness	131								
Basingstoke	102								
Bexhill	31								
Campbeltown	353								
Galashiels	172								
Inchcolm	171								
Kilmarnock	375								
Broadstairs	256								
Braishfield	45								
Milton Keynes	179								
Whyteleaf	124								
Croydon TN	63								
Chichester	31								
Dorking	90								

Kennington DI	72				
Farningham	130				
Hardwick	51				
Marsh Gibbon	53				
Coatbridge	399				
Shorne	108				
Tatsfield	70				

Appendix C - List of Major Projects (Scotland)

Cat.	Asst.	Site / Pipeline	Project	Ex. Site Area (m2)	Approx. avail area(m2)
Integrity	PRS	Musselburgh PRS (Environment Volume Driver?)	Full Rebuild and Relocation due to flooding	1200	122
Growth	PRS	Tranent PRS	Full rebuild	3140	200
Integrity	PRS	Airth	Full site rebuild	1500	140
Integrity	PRS	Lauder	Full site rebuild	1500	140
Integrity	PRS	Newton Means and Waterfoot PRS	Combine sites	3000	180
Integrity	PRS	Georgetown PRS	Rebuild	1900	155