



Grantham Canal Park – a Strategy for canal restoration and economic development

**Action Plan
April 2017**

Document Control Sheet

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1 Grantham Canal Park Action Plan - April 2017

1.1.1 The *Grantham Canal Park Strategy* has the following interlinked themes:

- **Regional Positioning:** the Grantham Canal Park as an East Midlands asset
- **Canal Restoration:** bringing navigation back to the Grantham Canal
- **Links in the Chain:** Punctuating the canal, focussing activity at key locations to promote interest, increased use and build sustainable businesses.
- **A connected and cared for environment:** Building on the area's high quality environment and biodiversity as a natural and visitor asset & developing an expansive green infrastructure network, linking the region's urban and rural areas through active travel and recreation links
- **Complementary Economic Development and Tourism Initiatives** : and
- **Positive Development Approach:** the Grantham Canal - maintaining and enhancing the environment & a potential solution to development constraints

1.1.2 In developing the Strategy, the following actions were agreed as the basis for delivering the Grantham Canal Park. It should be reviewed annually.



Regional Positioning: Grantham Canal Park as an East Midlands asset			
	Action	Responsibility	Timing
RP1	Relaunch the Grantham Canal Partnership. The activities of the Grantham Canal Society have helped protect the canal's status and delivered elements of restoration. An increasingly active role is required from regional partners – local authorities, LEPs and others - to deliver the Strategy. Following a review of organisational objectives, including consideration of the resources which will be dedicated to strategy delivery, the Grantham Canal Partnership should be relaunched behind a clear operational remit.	The Trust , GCS, GCP members	EW
RP2	Develop summary Grantham Canal Park ' <i>position & ambition</i> ' statements for each Local Authority, identifying strategy implications for each area including: core economic, tourism, environmental housing and other issues; canal and GCP proposals; prospective timescales; funding requirements; assessment of contribution to wider Local Authority policy objectives, and quantitative impact.	LA officers, The Trust , Local Nature Partnerships	EW
RP3	Promote the Grantham Canal and its surrounding area as an economic development and tourism asset for the Midlands Engine, reflecting this in planning, economic development and tourism policy: <ul style="list-style-type: none"> - Develop consistent position statements (including economic & tourism analysis) in advance of requirements of Local Authority Development Plan Schemes - Develop annual Grantham Canal Park prospectus statements (including economic, tourism and others supporting analysis) to promote inclusion of Grantham Canal in D2N2 and Leicester and Leicestershire Strategic Economic Plans, coinciding with annual reviews - Influence Visitor Economy Advisory Groups, LEP Infrastructure Group 	LAs , the Trust	ST
	Support for the Trent Link articulated in the planning, transport and other policies of Rushcliffe Borough Council and Nottinghamshire County Council. Develop consistent wording for planning and other policy documents to be launched 2017	Rushcliffe BC. Nottinghamshire CC , the Trust	ST
RP4	Develop Grantham Canal Park Engagement Strategy to involve local communities. While visitors from elsewhere will be important, local residents are likely to be the main users of restored canal infrastructure and the neighbouring environment as well as one of the main source of custom for businesses. Local community support is essential to the success of the restoration of the Grantham Canal and the Grantham Canal Park concept. The Grantham Canal Park must be promoted at every opportunity by all relevant departments of the Trust, Councils and other GCP partners. Liaison with local community groups, business organisations, Parish Councils and others should aim to establish their views on positioning the area as a regional asset, capturing relevant opportunities and issues that emerge.	The Trust . Parish Councils, GCS LAs	ST
RP5	Develop Brand & Marketing strategy– 'name', signs, website, supporting brochures, clearly linked to a product which the Grantham Canal Park can offer, and what it hopes to offer in the future. Involvement of local community groups, business organisations and Parish Councils is vital. This should develop the marketing concept to be embedded, followed by outline actions to support communication of restoration delivery at different stages	Experience Nottinghamshire Leicestershire Promotions The Trust LAs Visitor Economy Action Group- D2N2 LEP	ST



Canal Restoration: bringing navigation back to the Grantham Canal			
	Action	Responsibility	Timing
	<p>A schedule of the improvements involved in restoring the Grantham Canal has been developed in preparing this Strategy. This has brought together available information from various sources including the Trust and Grantham Canal Society assessments of requirements at different points along the canal. It details identified requirements for: bridge replacement and improvement (including road, accommodation and footbridges); lock repairs (including weir removal, renovation, paddle gear work and gate repairs); feeder and reservoir repairs; relining of the canal; dredging along the watercourse; towpath improvements; embankment improvements; as well as the various elements associated with construction of the Trent Link.</p> <p>For ease of reference, this information is presented in a series of appendices covering individual sections of the canal corridor, namely: 1. the A52 to the A46; 2. the A46 to Hickling; 3. Woolsthorpe; 4. Woolsthorpe to Grantham (A1); and 5. The Trent Link.</p> <p>This is likely to be the most expensive element in the development of the Grantham Canal Park. Based on the unit cost of each element (which tends to overestimate costs), comprehensive canal restoration costs are estimated at £70 million, £22.2 million of which would see construction of the Trent Link. The latter element is broadly consistent with the detailed costs provided for the Preferred Option for the Trent Link in 2009¹. However, the cost estimates prepared to date do not take account of two factors with the potential to achieve major cost reductions, namely: the potential for using volunteers; and aligning canal infrastructure improvement in packages of work closely linked to the economic development, tourism and wider objectives of the partner authorities.</p> <p>The Strategy promotes the Grantham Canal's restoration as distinct tourism, recreation and transport infrastructure. With its proximity to Nottingham, Grantham, the Trent and the strategic road infrastructure which connects them, in the next 10-15 years' opportunities may arise for restoration and improvement of sections of the canal in parallel e.g. an upgrade to the A1, A52 or A46. While none of these are necessarily being progressed at present, the Strategy should be sufficiently flexible to respond to such opportunities as they arise.</p>		
CR1	<p>A comprehensive audit of volunteering capacity and training requirements associated with the Grantham Canal Park.</p> <p>Substantial cost efficiencies have been achieved in the volunteer-led restoration of Locks 14 and 15, funded through HLF. In delivering the physical lock restoration, working with Grantham Canal Society, Grantham College and others, volunteers have been equipped with the necessary training and accreditation (e.g. for machine operation) required. The skills and working practices acquired are transferable in many cases. Volunteering activity is presently coordinated through the Grantham Canal Society. With volunteers largely drawn from the retired population, this places a limit on the numbers who may be actively involved in a Grantham Canal Park –wide programme, at the same time restricting the extent to which economic activity may be increased through providing training which potentially leads to paid employment.</p> <p>The scale and likely phasing of canal restoration will afford work experience and training opportunities of different types, whether linked to volunteer-led or traditional construction work. In Nottingham construction and related training is provided at institutions such as Central College, City College and New College, while the Construction Action Group of Employers (CAGE) seeks to increase the level of related skills available to local employers. At the eastern end of the Grantham Canal, Grantham College offers a similar range of courses and training opportunities. Canal restoration can provide a platform for programmes to address construction skills shortages with practical application of construction techniques. With Nottingham and Grantham in easy reach, coordinated volunteering & training can also help to increase wider economic activity.</p>		
	<p>This initiative aims to:</p> <p>a) Build on the experience of the Grantham Canal Society at Locks 14 and 15 and produce a detailed profile of the skills required in delivering the different elements of canal restoration;</p>	GCS, the Trust	ST

¹ SWG, 2005



Canal Restoration: bringing navigation back to the Grantham Canal			
	Action	Responsibility	Timing
	b) Identify the potential scope of training and volunteering contributions to canal restoration (based on the experience of Locks 14 and 15, as well as initiatives elsewhere);	GCS , the Trust, IWA	ST
	c) Identify prospective training programmes, including existing programmes. Where gaps in provision of an appropriate scale are identified, specifications for additional programmes should be developed;	Nottingham and Grantham FEIs, The Trust	ST/MT
	d) Identify related budgets and sources of funding		
	e) Assess volunteering capacity of the areas in and around the Canal Park (liaising with LAs, community organisations and other relevant interests); and	The Trust GCS , LAs, Volunteer Groups, CVS	ST
	f) Develop an associated employability strategy to ensure canal restoration works benefit residents and businesses across the wider area. * delivery linked to construction phasing.	LAs , The Trust, GCS	ST/MT*
CR2	<p>Prepare detailed canal restoration phasing programme, complementary with wider regeneration, greenspace development, tourism and other initiatives.</p> <p>Appendix 1 shows an indicative phasing for canal restoration based on the prioritisation indicated in the workshops. Canal restoration will require to be funded by a combination of National and Local Government, Local Economic Partnerships and other regional bodies, Heritage Lottery Fund or other ad hoc funding applications and private sector contributions. While canal and related investment may in theory be eligible for funding under the current D2N2 European Structural and Investment Fund Strategy 2014-2020², there is uncertainty over the availability of short term EU funds (and indeed their matching public and private sector allocations) following the June 23rd referendum result. In the medium to long term this funding will not be available. The overall funding environment is also constrained. With canals not considered critical transport or other infrastructure, funding of the nature and scale needed to support restoration will only be available where it can be shown to meet broader priorities (and targets) as well.</p>		
	<p>A preferred phasing will be identified reflecting planned and committed restoration activity and the priorities of Grantham Canal Partnership members and others, drawing clear links between canal restoration and:</p> <ul style="list-style-type: none"> ▪ Developing the tourism and visitor attraction of the Grantham Canal Park (including LC actions); ▪ Building the area's green and blue infrastructure (including CE actions below), conserving and enhancing environmental assets where possible ; ▪ Complementary economic, employability and other participative goals (including those referred to at CR1); ▪ Strategic development sites, where the processes adopted under PD may be a source of funding; and ▪ Potential upgrading or extensions of strategic or local road, rail or other infrastructure. <p>This should be reviewed regularly to ensure the flexibility to respond to funding opportunities as they arise.</p>	<p>The Trust GCS LAs private sector</p>	ST
CR3	<p>A detailed cost analysis should be prepared following completion of the preferred phasing, including sensitivities reflecting the use of contractors or volunteers. With the potential exception of the Trent Link, phasing parcels (packages of projects) of between £1m and £5m should be identified to optimise funding flexibility.</p>	<p>The Trust GCS</p>	ST

² Thematic Objective 6: Protecting the Environment and Promoting Resource Efficiency. Eligible activities include investment in Green and Blue infrastructure where it can be shown to support wider economic objectives.



Links in the Chain: focussing activity at key locations to promote interest, increased use and build sustainable businesses			
Action	Responsibility	Timing	
<p>Visitor and tourism destination development is a central part of the strategy, driving marine and on- land activity and vital in establishing the Grantham Canal Park as a regional proposition.</p> <p>This will build and further extend the attraction of existing destinations such as the Vale of Belvoir, Belvoir Castle and Holme Pierrepont. It will also promote development of business services and facilities to capture the economic benefit from the increased profile afforded by the establishment and then subsequent development of the Grantham Canal Park. The establishment of visitor-focussed gateways at the main points of access to the Grantham Canal Park is firmly focussed on attracting visitors and interest from a regional catchment and beyond.</p> <p>Working with the programme of canal restoration, inclusion of these integral elements of the Grantham Canal Park provides a major opportunity to reinforce the Vale of Belvoir's tourism role at the same time providing a major stimulus to the development of Grantham and Holme Pierrepont as visitor hubs. Re-establishing navigation to Grantham will enable more boat owners to travel across the eastern part of the region, generating demand for supporting mooring and visitor facilities as they do so. The 'gateways' should be clearly visible, acting as attractions in their own right, with the intention over time of becoming new stops on East Coast tourism routes³. Combined with co-ordinated marketing, the restored canal, existing assets, and gateways will add significantly to the tourism offer, encourage new visitors, retain existing visitors longer and in so doing support local hotel, restaurants and tourism operators.</p>			
LC1	<p>Establishment and Development of Gateways</p> <p>1. Grantham/A1 Gateway</p> <p>The first of the 'gateway' developments is proposed west of the A1 at Grantham. This takes advantage of: the current condition of the canal – the stretch west of the A1 to Woolsthorpe is the only navigable section; accessibility and facilities – it abuts the A1/A607 junction and an existing hotel; the potential for ready pedestrian access to Grantham town centre; and it represents a clear opportunity to promote and raise the profile of the Grantham Canal Park - some 37,000⁴ vehicles pass this point each day (13.5 million annually).</p> <p>Destination development will involve the following:</p> <ul style="list-style-type: none"> ▪ Concept definition and specification: the scale and balance of uses and facilities to be accommodated; <p>The concept should recognise the heritage of the canal and the Grantham area. Local community engagement is essential. A high quality structure or piece of public realm should be incorporated recognising the gateway function. Uses consistent with HLF, LEP and other potential funding sources should be considered as appropriate;</p> <ul style="list-style-type: none"> ▪ Consideration of appropriate sites, with canalside location prioritised; ▪ Liaison with landowners and neighbouring landowners as appropriate; ▪ Development of planning strategy (the area is in agricultural use and has high landscape sensitivity); 	GCS, the Trust, SKDC, LCC, GLLEP, private sector, local community groups	ST
	<ul style="list-style-type: none"> ▪ Preparation of supporting funding bids and technical studies as appropriate; ▪ Submission of supporting planning application(s) <i>dependent on above</i>; ▪ Construction, & appropriate marketing development <i>dependent on above</i>. 		ST
			MT

³ Since its opening in 2014, the Falkirk Helix has generated a major increase in coach tours and hotel visits to the area,

⁴ DoT Traffic Counts, AADF data 2015



Links in the Chain: focussing activity at key locations to promote interest, increased use and build sustainable businesses		
Action	Responsibility	Timing
<p>2. Tollerton Beacon The canal is culverted at the A52 at Tollerton, where the canal enters Nottingham before proceeding towards the City Centre with a surfaced towpath alongside. The point where the canal emerges east of the A52 forms the northern boundary of the Gamston site. Some 27,000 vehicles pass this point daily, 9.9 million annually. A tall landmark is proposed, consistent with the branding adopted for the Grantham Gateway, visible to passing motorists and raising its profile in communities in West Bridgford. A 'gateway' at this point will announce the western entry to the Grantham Canal Park.</p> <p>It is vital that the communities west of the A52 are engaged in the design of the gateway and ensuring local community access to it. While it would need to be determined, its most likely location would be on the Gamston side of the A52. A sequence of tasks similar to that for LC1 is envisaged. As public realm with few opportunities for related development it is suggested as a project in the short term.</p>	The Trust, GCS, RBC, NCC , N2D2, private sector, local community groups	ST
<p>3. Holme Pierrepont marina and surrounding area The third 'gateway' would be associated with the northerly entrance to the Grantham Canal Park. It would have a clear focus on the marine function of the canal and its link to the Trent. Development would be linked to completion of the Trent Link and comprise: mooring and other facilities for canal and other vessels; café and leisure facilities; pathways and potentially operational links to established sporting and other facilities at Holme Pierrepont; links to the towpath and on to riverside walkways; clear signage and branding consistent with the other Grantham Canal Park 'gateways'.</p> <p>This third gateway will be incorporated into the design of the Trent Link. As with the other gateways, its concept should be linked to the heritage and developing role of the area. Local communities (potentially including Radcliffe on Trent) and Holme Pierrepont user groups should be involved in its design and development.</p> <p>While boat numbers will be an important consideration commercially, establishment of a sustainable level also needs to reflect the capacity of SSIs to absorb boat movements. Potential effects on the dispersal of flood waters need to be fully considered in the design process.</p>	The Trust, GCS, RBC, NCC , N2D2, private sector, local community groups	MT
<p>LC2</p> <p>Canal Community Plans Canal restoration and promotion of the Grantham Canal Park will lead to increasing interest and visitor numbers in the communities along the canal. In larger communities - Cotgrave, Cropwell Bishop, Redmile Harby & Hose and others – as well as smaller settlements, canal restoration will generate demand for improved links, including greenspace links, to the canal among local residents. Higher footfall and use of the towpaths by cyclists and others will also generate local business opportunities. The canal's potential needs to be fully recognised in relevant community development strategies or settlement level plans.</p>		ST
<p>A series of Canal Community Plans will be prepared in the next 5 years detailing the tourism, leisure, recreational and other development opportunities which canal restoration presents and indicating how community benefits can be maximised and sustained. These should indicate community priorities and how canal restoration and related opportunities contribute to them. With specific facilities and business opportunities, the Plans should also consider the scope to augment existing or introduce new events. Canal Community Plan preparation will</p>	Parish Councils GCS supported by the Trust Community groups LAs LEPs	ST



Links in the Chain: focussing activity at key locations to promote interest, increased use and build sustainable businesses		
Action	Responsibility	Timing
be timed consistent with the phasing strategy at CR2. Their delivery will be subsequently linked to the availability of funding.		

<ul style="list-style-type: none"> A connected and cared for environment: Building on the area's high quality environment and biodiversity as a natural and visitor asset; developing an expansive green infrastructure network, linking the region's urban and rural areas through active travel and recreation links 		
Action	Responsibility	Timing
<p>Over time, Grantham Canal Partnership and its member organisations have protected the line of the canal and its surrounding countryside through consistent green infrastructure policy designations. This forms a solid platform for a coordinated greenspace and environmental initiative stretching the length of the canal, linking communities to the canal, and linking the canal to regional path and cycle path networks.</p> <p>Conservation and enhancement of ecological resources will continue to be a critical component, in parallel with measures to further interpret existing and developing assets. Further development of the green infrastructure network will include development of a specific policy framework to balance the promotional and developmental elements of the strategy with the need to protect and enhance the special interest of the canal.</p> <p>While it is anticipated that some of the green infrastructure links will emerge from Canal Community Plans as they develop, there will also be a requirement for consistent improvements at key points where strategic paths connect with the canal or where access between the canal and features of attraction of interest require improvement. Accessibility considerations will also be critical in ensuring existing and new communities have strong pedestrian links to the canal, and this will be particularly pronounced at either end of the canal and where it passes larger settlements.</p> <p>A consistent approach to the design of shared use paths linking communities to the canal is vital in aiding interpretation and orientation as well in developing a consistent brand image for the Grantham Canal Park. Maintenance of new and existing paths and the vegetation around them will be critical in encouraging their increased use for recreation and active travel</p>		
<p>CE1</p> <p>Developing Supporting Policy Develop a policy framework for moorings, dredging, fisheries, events and other areas to promote early consideration, and subsequent management, maintenance and enhancement of the the canal's environmental and ecological assets. While promoting navigation and related opportunities, policy will also recognise the need to manage potential impacts as navigation is re-established.</p> <p>Design guide for canal links Building on established Trust standards, preparation of a guide to ensure consistency in the design of shared use paths, community accessways, routefinding signage and other 'furniture' (milestone markers, exercise facilities, seating, interpretation etc.) would be one of the actions completed at the start of Strategy implementation. This should be linked to regional branding of the Grantham Canal Park (see RP5)</p>	<p>LAs The Trust Natural England</p>	<p>ST</p>
<p>CE2</p> <p>Integration of towpath and community pathways Programming of pedestrian links to the canal from local communities should be consistent with towpath improvements, although there may be exceptions where specific canalside facilities, local nature facilities or other features progress in advance of them. Following establishment of the preferred phasing, and incorporation within Canal Community Plans they should move to delivery (potentially with the use of volunteering resources and links to regional training programmes, see CR1)</p>	<p>The Trust LCC,NCC, Community groups</p>	<p>ST/</p> <p>MT</p>



<p>■ A connected and cared for environment: Building on the area’s high quality environment and biodiversity as a natural and visitor asset; developing an expansive green infrastructure network, linking the region’s urban and rural areas through active travel and recreation links</p>			
	Action	Responsibility	Timing
	Develop dredging programme at sections and key points experiencing extensive weed growth.	GCS, The Trust	ST
CE3	<p>Addressing major barriers to access The Grantham Canal Park should primarily be of benefit to those in canalside communities, including Nottingham and Grantham residents. The A52 and A1 are major barriers to direct pedestrian and cycle access to Grantham and Nottingham via the canal. The costs associated with improving canal access at these points are likely to be considerable. Early identification of potential options is required to identify practical solutions in the medium to long term, or opportunistically associated with prospective junction re alignments or carriageway upgrades in the future.</p>	LCC, NCC, Highways Agency (The Trust, GCS as influencers)	ST
CE4	<p>Emphasising strategic connections Ensuring high accessibility to points of interest and connections with other strategic cycling and walking infrastructure is important in the development of the Grantham Canal Park as a regional asset e.g. at the junction of the Viking Way and Sustrans Route 15 with the canal at Woolsthorpe, ensuring stronger and greater variety of links with Cotgrave Country Park, or in enhancing accessibility where appropriate to sites of ecological significance such as the Kinoulton March and Canal SSSI. This is an action which could proceed swiftly following completion of the design guide</p>	The Trust LCC,NCC,LAs Sustrans, Community Groups	ST
CE5	<p>Develop pathway maintenance agreements Establishment of maintenance arrangements (using existing templates) will ensure quality is maintained and encourage increased use. Alongside traditional LA funding, the potential capacity of voluntary organisation or social enterprises should be considered</p>	LAs community organisations The Trust	ST

<p>A Positive Development Approach</p>			
	Action	Responsibility	Timing
	<p>Establishment of the Grantham Canal Park aims to achieve a significant improvement in the visitor, recreational and residential amenity of the area. It aims to add further to the quality of life enjoyed by its residents. As it becomes increasingly desirable, interest in residential and other forms of development is likely to increase, with potential benefits for the ongoing sustainability of rural communities and levels of service provision in them. This action area has two main elements:</p> <ul style="list-style-type: none"> positive encouragement to developers of adjacent sites to consider the appropriate use of the Grantham Canal to absorb the drainage and water attenuation effects from nearby development. Where there are cost advantages, developers will be encouraged to fund improved canal infrastructure to enable this; and A consistent approach to development management across the Grantham Canal Park and neighbouring authorities. The remainder of the canal meant that for much of the last 50 years, development tended to ignore the potential effects on supporting canal infrastructure such as feeders, reservoirs and other supporting infrastructure. In some instances, canal feeders have been severed, leading to low water levels in certain stretches of the canal. Moving forward, the guardianship of the Grantham Canal will seek to ensure the integrity of supporting infrastructure, as well as the canal itself, is not inadvertently compromised in the development process. 		
PD1	<p>Examine potential development benefits from canal-based drainage solutions The use of the canal to address the potential surface water and drainage implications associated with proposed development should be tested. It has the potential to yield considerable benefits to the developer while also assisting adjacent canal restoration. With reference to sites in the local area, this should</p>	The Trust	ST
















A Positive Development Approach			
	Action	Responsibility	Timing
	examine: the practicality of the use of canal infrastructure for this purpose; a comparison of the area of land required for any additional drainage infrastructure with the area of land required for SUDS/ attenuation were the canal not used; and an assessment of the impact on the potential developable area of a site.		
PD2	<i>A protocol for development in canalside areas</i> Development of standard text to be included in development management guidance to encourage developers to consider the use of the canal as an off site solution to mitigate the drainage implications associated with development. In canalside areas, this should require primary consideration of the canal and its potential ahead of on-site solutions. Only where the canal is shown not to be a cost effective alternative should on site measures be considered.	The Trust LAs development industry	ST
PD3	<i>Proactive canal guardianship</i> The Trust and Local Authorities will scrutinise the potential effects of proposals for neighbouring development of any type. This will include regular communication of proposed developments in canalside areas from planning departments to the Trust. Scoping Reports are submitted for Environmental Impact Assessments, The Trust should be automatically consulted. In pre-application discussions, developers will be encouraged to liaise with the Trust	The Trust, LAs	ST
PD4	<i>Preparation of guidance for canal development contributions</i> While it would not be applicable to existing permissions, Grantham Canal Partnership members should consider preparation of consistent guidance for development contributions to address related effects on canal infrastructure. This would recognise comparable experience elsewhere.	LAs The Trust	ST

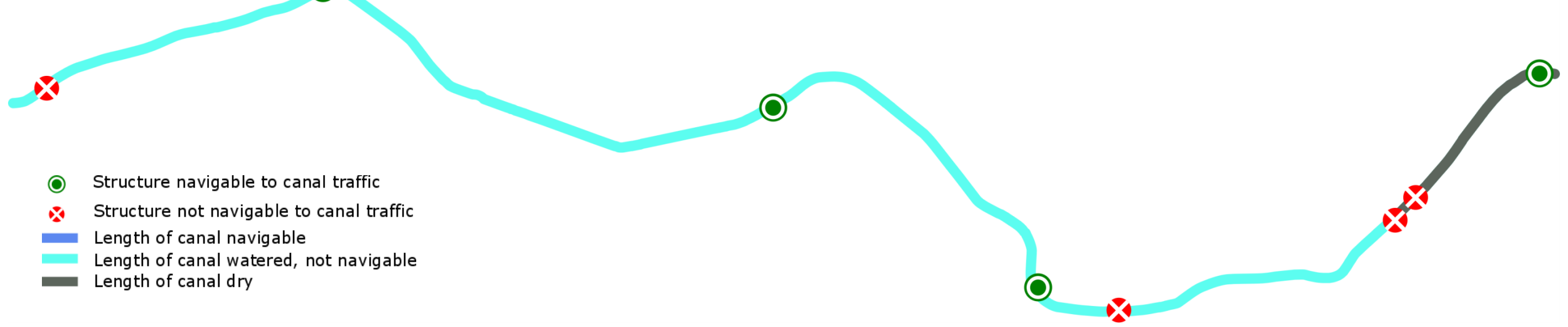
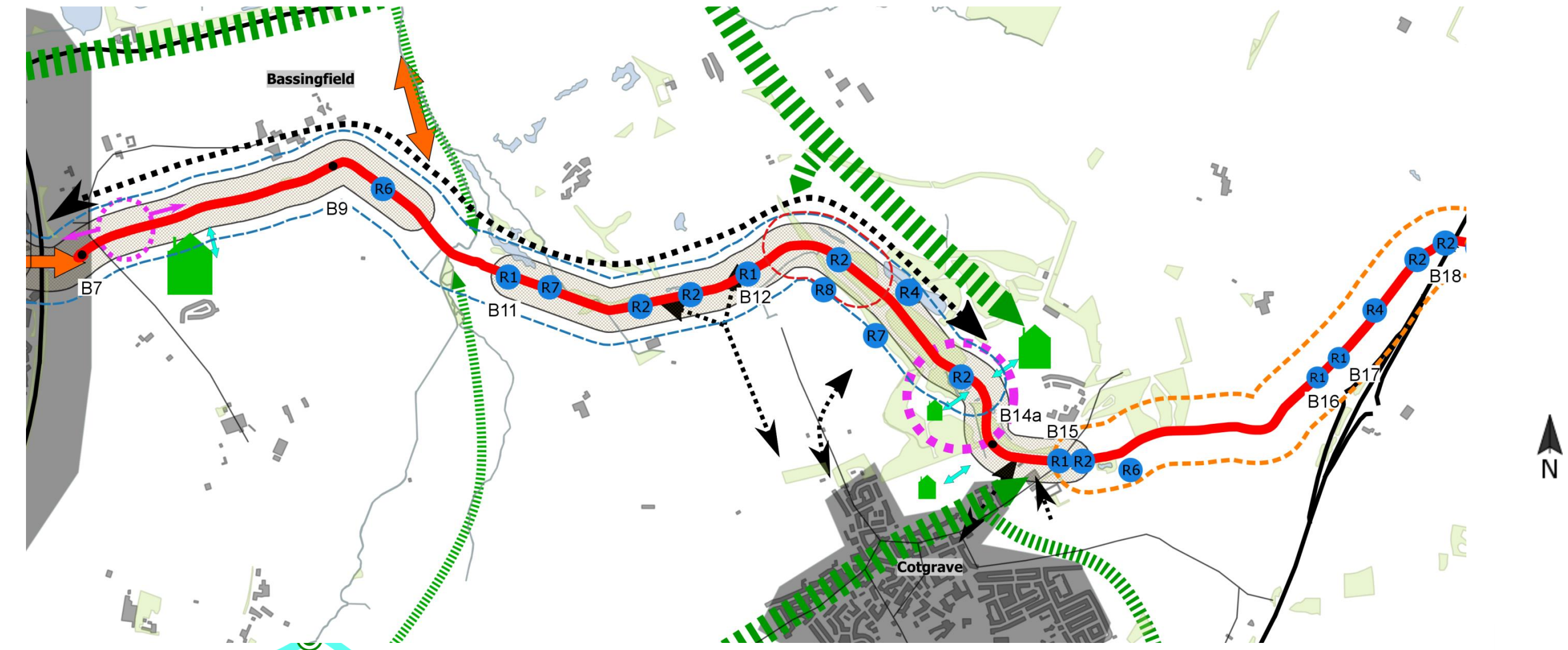
1.1.3 The strategy diagrams are replicated below.








SECTION 1- A52 TO A46

Key- Strategy














-  **Focal point:** moorings, marina and servicing facilities, leisure facilities, links to settlements, path networks, interpretation
-  **Gateway:** regionally significant attraction with supporting facilities
-  **Major Connections:** removal of major access barriers to pedestrian/cycle and or boat access
-  **Indicative green infrastructure corridors** currently or potentially contributing to the Grantham Canal Regional Network
-  **Active travel route, signage and interpretation:** linking residential areas to work, leisure and other activities
-  Existing or future residential potential contributing to sustainable community expansion
-  SUStrams: National Route
-  Viking Way
-  Existing or potential boating trips
-  Dredging
-  Relining
-  Embankment Repairs
-  Towpath improvements

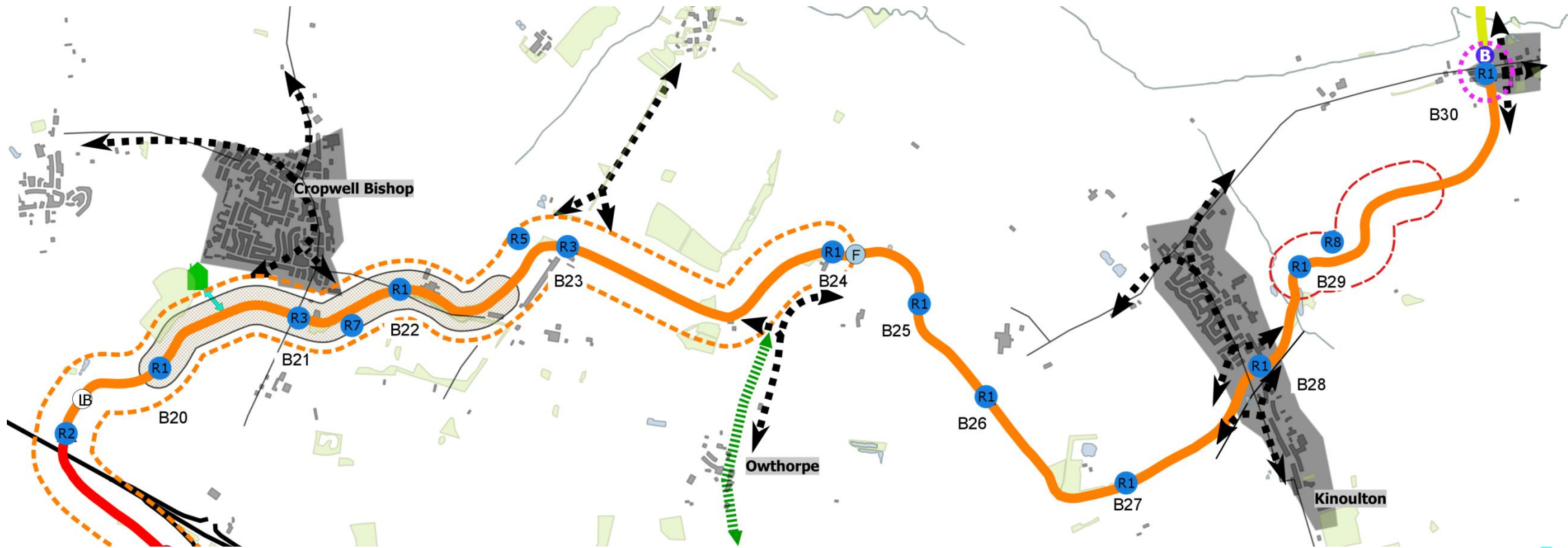







-  Structure navigable to canal traffic
-  Structure not navigable to canal traffic
-  Length of canal navigable
-  Length of canal watered, not navigable
-  Length of canal dry

SECTION 2- A46 TO HICKLING

Key- Strategy














-  **Focal point:** moorings, marina and servicing facilities, leisure facilities, links to settlements, path networks, interpretation
-  **Gateway:** regionally significant attraction with supporting facilities
-  **Major Connections:** removal of major access barriers to pedestrian/cycle and/or boat access
-  **Indicative green infrastructure corridors** currently or potentially contributing to the Grantham Canal Regional Network
-  **Active travel route, signage and interpretation:** linking residential areas to work, leisure and other activities
-  Existing or future residential potential contributing to sustainable community expansion
-  SUSTrans: National Route
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-  Towpath improvements

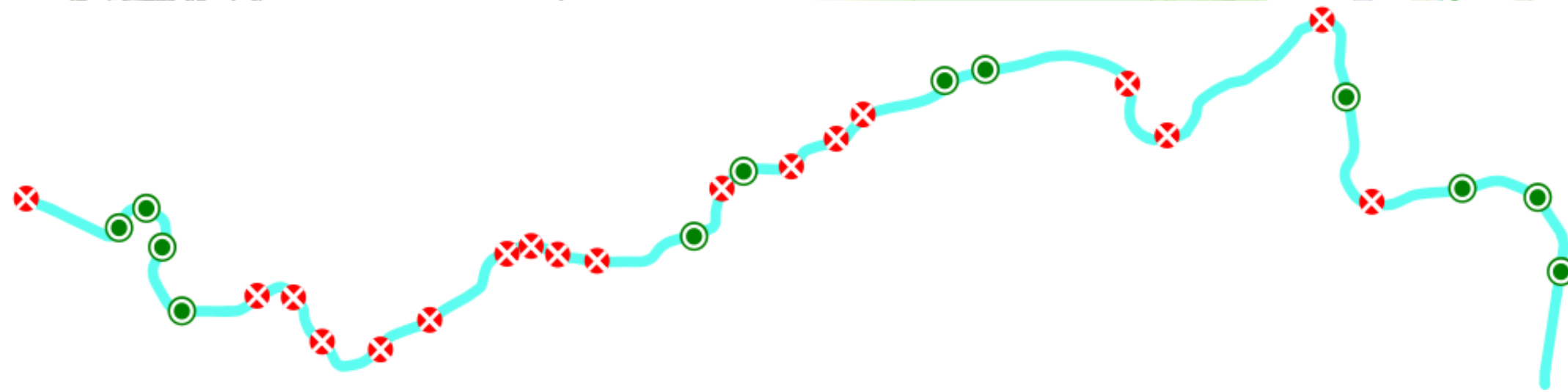
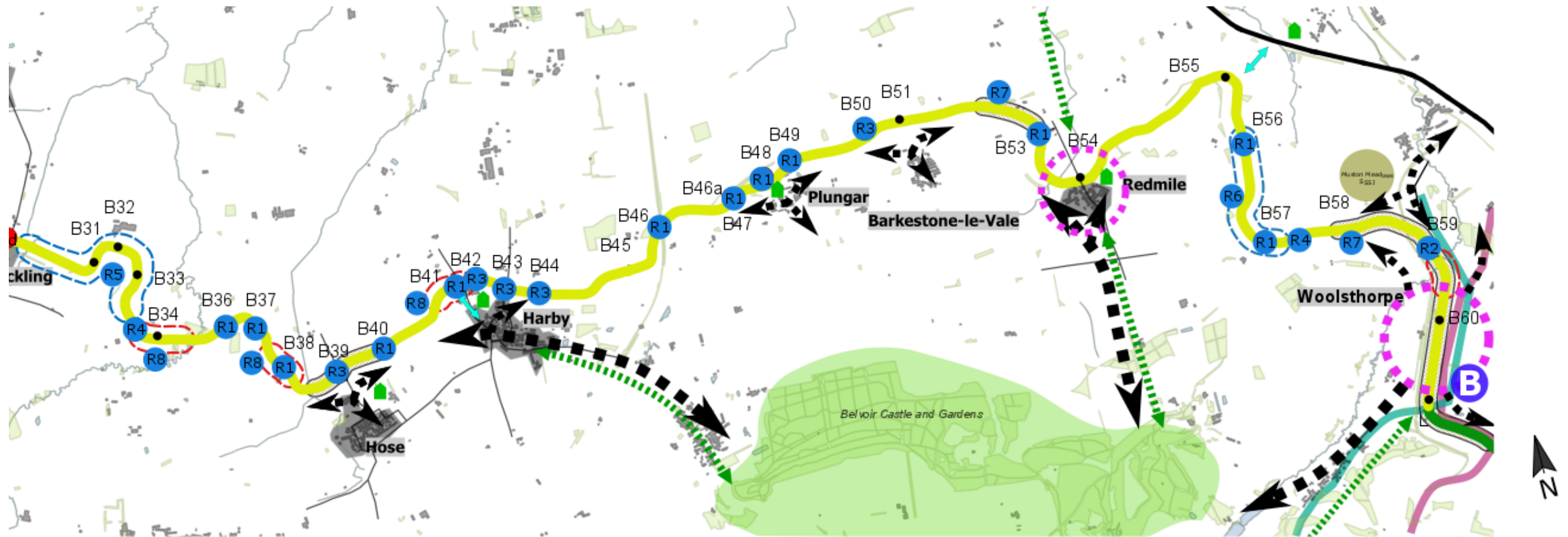







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-  Structure not navigable to canal traffic
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-  Length of canal dry

SECTION 3- WOOLSTHORPE

Key- Strategy




-  **Focal point:** moorings, marina and servicing facilities, leisure facilities, links to settlements, path networks, interpretation
-  **Active travel route, signage and interpretation:** linking residential areas to work, leisure and other activities
-  **Major Connections:** removal of major access barriers to pedestrian/cycle and or boat access
-  **Indicative green infrastructure corridors** currently or potentially contributing to the Grantham Canal Regional Network
-  **Active travel route, signage and interpretation:** linking residential areas to work, leisure and other activities
-  Existing or future residential potential contributing to sustainable community expansion
-  **Dredging**
-  **Relining**
-  **Embankment Repairs**
-  **Towpath improvements**
-  **SUSTRans: National Route**
-  **Viking Way**
-  Existing or potential boating trips












-  Structure navigable to canal traffic
-  Structure not navigable to canal traffic
-  Length of canal navigable
-  Length of canal watered, not navigable
-  Length of canal dry

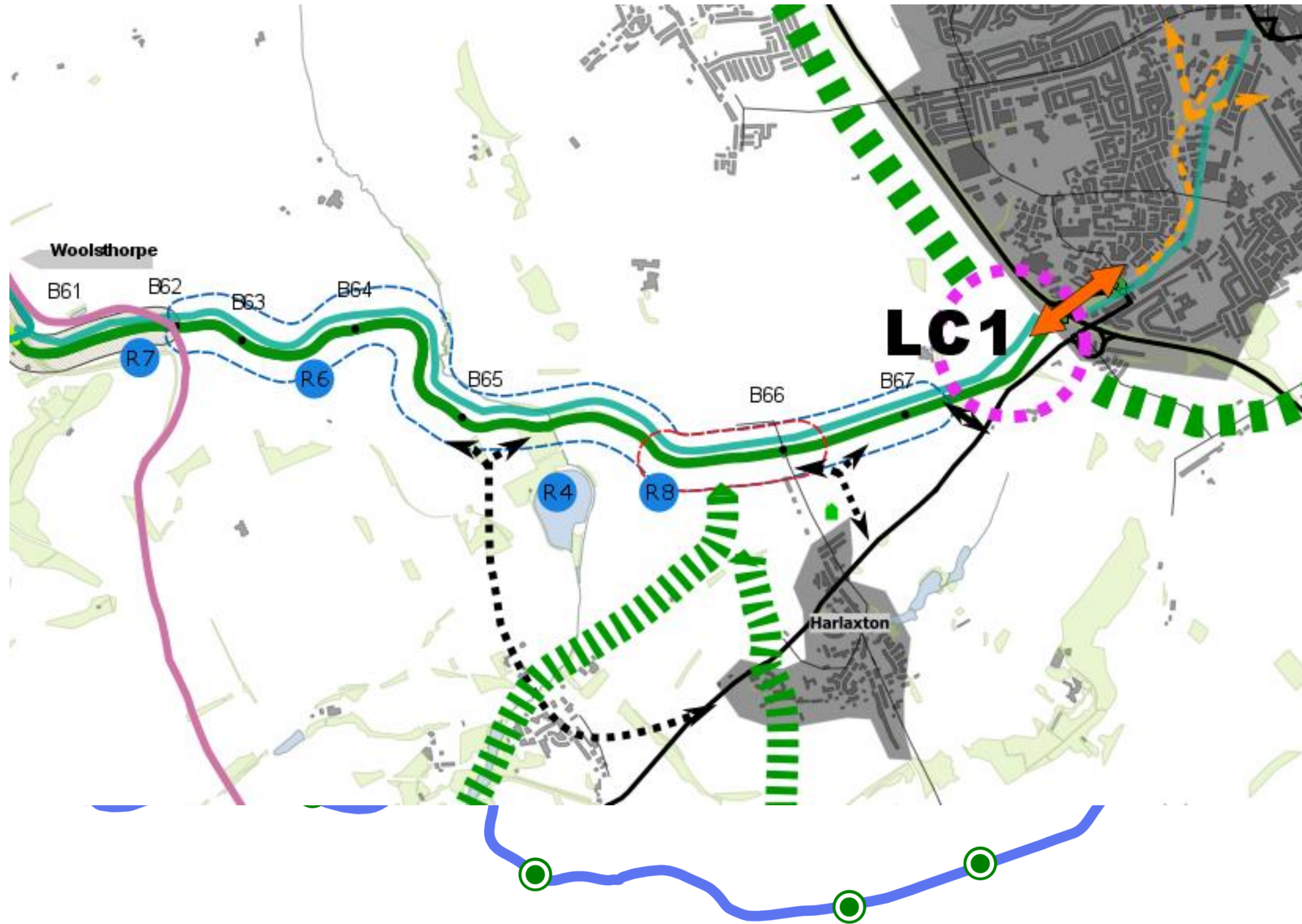
SECTION 4-WOOLSTHORPE TO GRANTHAM (A1)

Key- Strategy

-  **Focal point:** moorings, marina and servicing facilities, leisure facilities, links to settlements, path networks, interpretation
- G** **Gateway:** regionally significant attraction with supporting facilities
-  **Major Connections:** removal of major access barriers to pedestrian/cycle and/or boat access
-  **Indicative green infrastructure corridors** currently or potentially contributing to the Grantham Canal Regional Network




-  **Active travel route, signage and interpretation:** linking residential areas to work, leisure and other activities
-  Existing or future residential potential contributing to sustainable community expansion
-  SUStrams: National Route
-  Viking Way
-  Existing or potential boating trips






-  Dredging
-  Relining
-  Embankment Repairs
-  Towpath improvements








SECTION 5- TRENT LINK

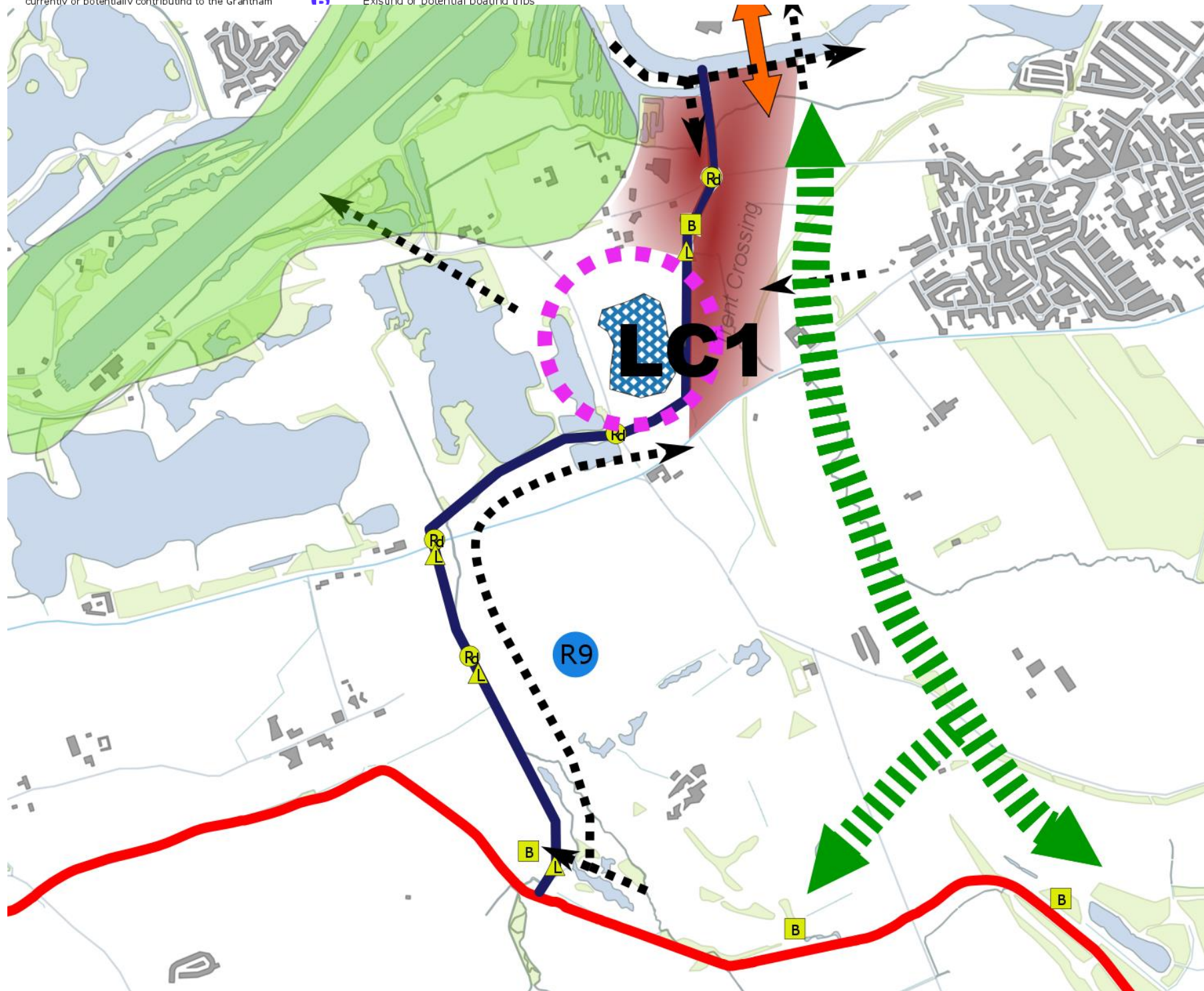
Key- Strategy

-  **Focal point:** moorings, marina and servicing facilities, leisure facilities, links to settlements, path networks, interpretation
- G** **Gateway:** regionally significant attraction with supporting facilities
-  **Major Connections:** removal of major access barriers to pedestrian/cycle and or boat access
-  **Indicative green infrastructure corridors** currently or potentially contributing to the Grantham

-  **Active travel route, signage and interpretation:** linking residential areas to work, leisure and other activities
-  Existing or future residential potential contributing to sustainable community expansion
-  SUStrams: National Route
-  Viking Way
-  Existing or potential boating trips

Key- New Assets

- Object
-  Road
 -  Backpump
 -  Footbridge
 -  Lock
 -  Accommodation



Appendix 1 Cost Estimates

Canal Restoration : Elements			
Element	Responsibility	Timing	
<p>A detailed schedule of the improvements involved in restoring the Grantham Canal has been developed in preparing this Strategy. This has brought together available information from various sources including the Trust and Grantham Canal Society assessments of requirements at different points along the canal. It details identified requirements for: bridge replacement and improvement (including road, accommodation and footbridges); lock repairs (including weir removal, renovation, paddle gear work and gate repairs); feeder and reservoir repairs; relining of the canal; dredging along the watercourse; towpath improvements; embankment improvements; as well as the various elements associated with construction of the Trent Link.</p> <p>For ease of reference, this information is presented diagrammatically in the report covering individual sections of the canal corridor, namely: 1. the A52 to the A46 ; 2. the A46 to Hickling; 3. Woolsthorpe; 4. Woolsthorpe to Grantham (A1) ; and 5. The Trent Link</p>			
R1	<p>Replacement of key road bridges: Detailed assessment of individual locations to determine appropriate bridge solutions. Includes B12, B15, B16, B21, B22, B24, B25, B26, B28, B30, B37, B39, B41, B43, B49, B53, B56.</p> <p>Replacement of key occupation bridges: Several occupation and accommodation bridges serve local farms and other land uses adjacent to the canal. Includes B17, B20, B27, B29, B36, B38, B40, B48, B57)</p> <p>Replacing footbridges: New pedestrian footbridges will be required where required where culverted in order to restore navigation. Includes B44, B46, B47</p> <p>Removing obstructions and installing new bridges is one of the most capially intensive phases of the canal restoration and will require a phased programme of construction based on the requirements of stakeholders whilst reflecting the strategy for gradually restoring navigation.</p> <p>These actions are considered essential to reinstating navigation and should therefore be prioritised.</p>	<p>LAs the Trust, some GCS skilled volunteer input.</p>	<p>Commencing in SHORT TERM; MEDIUM Term Schedule of works.</p>
R2	<p>Key lock repairs including weir removal, renovation, paddle gear work and gate repairs. This is required to ensure the canal is operational and its sections effectively linked for future boat movements. Locks requiring improvement include 4-9, north and north east of Cotgrave, and 11, 12 and 13, near Woolsthorpe. It is anticipated that a certain amount of work may be carried out by skilled volunteers, though THE TRUST will remain largely responsible.</p> <p>These actions are considered essential to reinstating navigation and should therefore be prioritised.</p>	<p>The Trust and GCS skilled volunteer input.</p>	<p>Commencing in SHORT TERM; MEDIUM Term Schedule of works.</p>
R3	<p>Minor bridge repairs will be required, in some cases rerouting piping, ramping, repairing bearings to accommodate traffic, or assessing brickwork. Bridges requiring repair include Bridge 42 and 50.</p>	<p>County Councils, District/Borough Councils, the Trust, some GCS skilled volunteer input. .</p>	<p>SHORT to MEDIUM TERM</p>



Canal Restoration : Elements			
	It is anticipated that a certain amount of work may be carried out by skilled volunteers.		schedule of works.
R4	Feeder and reservoir repairs may be required to assess and potentially increase water flow. This has been identified as problematic at Knipton, Cotgrave and Hollygate. This will require independent verification.	The Trust and GCS	MEDIUM TERM
R5	Relining the canal where it has dried out over time, particularly between the A46 and Hickling. This work is fundamental to restoring canal-wide traffic between potential nodes at Hickling and Cotgrave and eventually allowing full navigability. This work should be prioritised to maximise water retention and should therefore be completed prior to works to water resources.	The Trust and GCS	SHORT to MEDIUM TERM
R6	Dredging along the watercourse, particularly from the A52 to Cotgrave, past Redmile and leading to the terminus at the A1. On-site assessments will be required to understand the full extent of dredging required. Dredging may be undertaken by skilled volunteers (under Trust supervision), thereby reducing the costs associated with initially and ongoing spot dredging.	The Trust and GCS	SHORT to MEDIUM TERM
R7	Towpath improvements where it is considered to not to be in good condition. Trust assessments indicate that this is required between the A52 and Cotgrave, around Cropwell Bishop, Redmile, and Woolsthorpe. Towpath improvement costs may be reduced given potential variability in footpath condition. Very limited sections of the towpath are considered to be of poor condition which suggests	County Councils, District/Borough Councils, The Trust, GCS	SHORT TERM
R8	Bank improvements are planned where these are considered in Trust assessments to be in poor condition. Based on mileage data, this is anticipated around Cotgrave, Kinoulton, Harlaxton and Woolsthorpe, affecting 3.9km of the canal, though at portions this affects both sides of the canal. The costs associated with this action are modelled on available data based on mileage lengths. Full onsite assessments of requirements could significantly reduce costs.	The Trust, GCS, third parties e.g Biodiversity Action Groups	SHORT to MEDIUM TERM
R9	Cutting and preparing the new canal channel identified by the SWG Report (2005) along the Polser Brook to form a link with the River Trent will allow be a significant step in achieving full navigation. This is a capitally intensive phase requiring the construction of four new broad locks, backpumping systems, two new swing bridges and two fixed bridges. This phase will also see the extension of footpaths from the existing watercourse to the River Trent, connecting to potential greenways from Cotgrave and to Holme Pierrepont and Skylarks Nature Reserve.	County Councils, District/Borough Councils, The Trust	LONG TERM with potential for MEDIUM TERM works

Canal restoration: estimated costs		Scenario 1- Lower cost moveable bridges		Scenario 2-mid- range moveable bridges/public highway
A52 to A46				
	Engineering & Landscape	Cost		Cost
Number/Km				
5000	Towpath, 10,000 m2	£ 1,157,000.00	E	£ 1,157,000.00
2600	Paths 5,200 m2	£ 601,000.00	N	£ 601,000.00
4600	Dredging, 18,400 m3 (approx)	£ 1,490,000.00	E	£ 1,490,000.00
2000	Channel Lining, 2,000m	£ 2,540,000.00	E	£ 2,540,000.00
3	Moveable bridge, public highway	£ 1,950,000.00	E	£ 3,560,000.00
1	New Swing (nonpublic) (1)	£ 286,000.00	E	£ 286,000.00
7	Broad beam lock, minor repairs	£ 1,660,000.00	E	£ 1,660,000.00
2	Feeder Reconstruction	£ 120,000.00	E	£ 120,000.00
	Cotgrave Basin	£ 800,000.00	N	£ 800,000.00
500	Embankment	£ 203,000.00	E	£ 203,000.00
A46 to Hickling				
	Engineering & Landscape			
1	Broad Beam Lock, Minor Repairs	£ 237,000.00	E	£ 237,000.00
4780	Channel Lining (4780 m)	£ 6,100,000.00	E	£ 6,100,000.00
1	New fixed bridge	£ 3,600,000.00	E	£ 3,600,000.00
1	Bridge Repairs (major)	£ 107,000.00	E	£ 107,000.00
6	New moveable bridges	£ 3,900,000.00	E	£ 7,120,000.00
2	New Swing Bridge (Accommodation)	£ 572,000.00	E	£ 572,000.00
1000	Embankment repairs (approx 2000m2)	£ 406,000.00	E	£ 406,000.00
2500	Towpath	£ 578,000.00	E	£ 578,000.00
8700	Footpath improvements	£ 2,010,000.00	N	£ 2,010,000.00
	Public space and interpretation	£ 750,000.00	N	£ 750,000.00
	Boating facilities	£ 250,000.00	N	£ 250,000.00
1	Accommodation bridge	£ 1,877,000.00	E	£ 1,877,000.00



Canal restoration: estimated costs		Scenario 1- Lower cost moveable bridges		Scenario 2-mid- range moveable bridges/public highway
Hickling to Woolsthorpe				
	<i>Engineering & Landscape</i>			
1	New fixed bridge	£ 3,600,000.00	E	£ 3,600,000.00
1	New fixed bridge	£ 3,600,000.00	E	£ 3,600,000.00
1	New fixed bridge	£ 3,600,000.00	E	£ 3,600,000.00
1	Existing public road bridge minor repairs	£ 34,000.00	E	£ 34,000.00
	Feeder Reconstruction	£ 60,000.00	E	£ 60,000.00
2	Feeder Reconstruction	£ 120,000.00	E	£ 120,000.00
1	New accommodation bridge	£ 1,900,000.00	E	£ 1,900,000.00
1	New moveable bridge	£ 650,000.00	E	£ 1,186,666.67
1	New moveable bridge	£ 650,000.00	E	£ 1,186,666.67
1	New moveable bridge	£ 650,000.00	E	£ 1,186,666.67
1	New moveable bridge	£ 650,000.00	E	£ 1,186,666.67
1	New swing bridge, accomodation	£ 286,000.00	E	£ 286,000.00
1	New swing bridge, accommodation	£ 286,000.00	E	£ 286,000.00
1	New swing bridge, accommodation	£ 286,000.00	E	£ 286,000.00
1	New swing bridge, accommodation	£ 286,000.00	E	£ 286,000.00
1	New swing bridge, accommodation	£ 286,000.00	E	£ 286,000.00
1000	Dredging	£ 325,000.00	E	£ 325,000.00
1000	Dredging	£ 325,000.00	E	£ 325,000.00
1	New swing bridge (pedestrian)	£ 207,500.00	E	£ 207,500.00
1	New swing bridge (pedestrian)	£ 207,500.00	E	£ 207,500.00
1000	Footpath improvements	£ 232,000.00	N	£ 232,000.00
1500	Footpath improvements	£ 348,000.00	N	£ 348,000.00
2500	Towpath improvements	£ 580,000.00	E	£ 580,000.00
2000	Towpath improvements	£ 464,000.00	E	£ 464,000.00
500	Embankment, minor repairs	£ 101,500.00	E	£ 101,500.00



Canal restoration: estimated costs		Scenario 1- Lower cost moveable bridges		Scenario 2-mid- range moveable bridges/public highway
750	Embankment, minor repairs	£ 152,250.00	E	£ 152,250.00
500	Embankment, minor repairs	£ 101,500.00	E	£ 101,500.00
Woolsthorpe to A1				
	Engineering & Landscape			
750	Towpath improvements (750m)	£ 174,000.00	E	£ 174,000.00
900	Embankment improvements (1,800 m2)	£ 365,000.00	E	£ 365,000.00
3100	Dredging (12,400 m2)	£ 1,000,000.00	E	£ 1,000,000.00
	Marina and associated buildings	£ 2,000,000.00	N	£ 2,000,000.00
	Grantham Landmark	£ 5,000,000.00	N	£ 5,000,000.00
1	Feeder/Reservoir Reconstruction	£ 60,000.00	E	£ 60,000.00
4000	Path improvements (4km)	£ 928,000.00	N	£ 928,000.00
Trent Link				
	Engineering & Landscape			
2	New swing bridges (road)	£ 1,292,000.00	E	£ 1,292,000.00
1	New fixed bridges	£ 3,600,000.00	E	£ 3,600,000.00
4	New broad beam locks	£ 5,000,000.00	E	£ 5,000,000.00
4000	Towpaths (4km)	£ 925,000.00	E	£ 925,000.00
3.5	Lining	£ 4,565,191.90	E	£ 4,565,191.90
4	Backpumps (4)	£ 670,000.00	E	£ 670,000.00
3.5	New broad channel	£ 5,000,000.00	E	£ 5,000,000.00
3500	New Paths	£ 810,000.00	N	£ 810,000.00
1	New Culvert	£ 74,600.00	E	£ 74,600.00
4	New Footbridges	£ 1,100,000.00	E	£ 1,100,000.00