

Masterplan for Bolton Copperworks, Froghall, Staffordshire

On behalf of the Homes & Communities Agency &
Staffordshire Moorlands District Council

Final Report – May 2011



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1. Vision for Froghall

The vision for Froghall has emerged through detailed masterplanning work centred on the Thomas Bolton site. Through a design-led process it has become clear that the future of the village of Froghall and the Thomas Bolton site are implicitly linked and that the regeneration of the Bolton site can unlock wider benefits for the wider Churnet valley. Within this context the vision for Froghall and the Thomas Bolton site is as follows:

Froghall will become a principal gateway and destination for tourism within the Churnet Valley, with a stronger local community. It will be anchored by the heritage railway and associated activities, the Caldon Canal and Froghall Wharf, both of which will be better-connected, and new leisure and visitor facilities. The village of Froghall will grow and improve to offer new residential opportunities of a scale appropriate to the area and within an improved landscape setting. The riverside will be enhanced and traffic through the heart of Froghall calmed by improvements to the street environment. Employment uses will be retained on the core former Bolton Copperworks site, including the existing Thomas Bolton operation and new 'green' businesses. Contaminated sites will be cleaned-up, and environmental improvements made to existing buildings and where possible industrial heritage will be conserved and reused. Overall Froghall will be a better place, which offers more for residents, visitors and workers. It will be reconnected with the landscape and will be a more attractive place which has a more diverse and robust economy.

This vision will be realised over a period of 10-15 years and will present a challenging agenda to existing landowners and stakeholders. It will be critical to develop a robust planning strategy for the site to cement this approach to development within the statutory and regulatory framework and to ensure the masterplan becomes recognised as key document informing value and development going forward. Despite the prevailing economic conditions in early 2011, and more limited public sector investment in regeneration, there will be a crucial role for supporting the masterplan's implementation. Accordingly the site should be recognised as a strategic regeneration priority within Staffordshire Moorlands. Existing owners of the core Bolton Copper site and associated land will have a key role to play working in partnership with the public sector.



Artists impression of potential new development at Bolton Copperworks site

2. Introduction

This masterplan for Bolton Copperworks at Froghall, Staffordshire has been prepared by a team of consultants led by Taylor Young and comprising Ekosgen and Peter Brett Associates. The commissioning client for the masterplan is Staffordshire Moorlands District Council (SMDC) supported by the Homes and Communities Agency (HCA), through its Rural Masterplanning programme.

The client brief for the masterplan notes the following, which sets the basis for the consultant team’s work.

“Bolton Copperworks is a major rural developed site within the Churnet Valley which has been identified in the emerging Staffordshire Moorlands Core Strategy (Policy SS6c) as a ‘Major Regeneration Opportunity’... The site is considered to have significant potential for employment, residential, tourist related retail and accommodation, and leisure uses. The Core Strategy states that the Council’s intention is that the extent and nature of future development of the site is to be identified through the Site Allocations DPD supported by a masterplan.” (this masterplan)

Purpose of the Masterplan

The key objective of the masterplan is to provide a development framework for the site which establishes the broad spatial arrangement of uses, the scale and quantum of those uses and the supporting infrastructure and environmental works required to create a high quality place. All of this within the context of a clear strategic vision which has emerged through the masterplanning process and which has been tested with relevant local stakeholders, council officers and elected members.

This development framework will contribute to the evidence base for the Local Development Framework and specifically the Site Allocations Development Plan Document and will assist Staffordshire Moorlands Council in considering the future of the site and subsequent planning applications. Masterplans can vary in their focus. Some are more detailed than others in defining for example, the precise location of buildings. This masterplan is however more strategic in focus and creates a high level framework on which future masterplanning work should build.

Two appendices accompany this masterplan report, containing important factual information which support and have shaped the final masterplan. These are the Baseline Report and the Options Report. A summary of each is provided within this section of the masterplan.

3. Defining the Site

The masterplan boundary has evolved over the commission. The site boundary is shown on page 5 and includes several areas which are outside of the former Bolton Copper Site, including Froghall Wharf and land around the scrap yard, Brookfield and the railway station. The masterplan is a plan for Froghall and not just the Bolton Copperworks and indeed whilst Thomas Bolton’s remain a valued business on site the future of the area should be as a revitalised Froghall and not just as a redeveloped Bolton Copperworks site. For example people will choose to live and visit Froghall for the quality of life and / or the various activities it provides.

Taking a comprehensive approach has been important to add value to the masterplan. The recycling business / scrap yard for example sits adjacent to the river and there is potential to create an attractive riverside setting which can support a new character and sense of place and improved linkages. Taking this comprehensive approach will make delivery more complex as there will be several different ownerships and businesses to consider and work with. However, the most effective masterplans accept this level of complexity as this is often the only means by which transformational change can be delivered.



The railway station on the heritage railway



The recycling business at the riverside

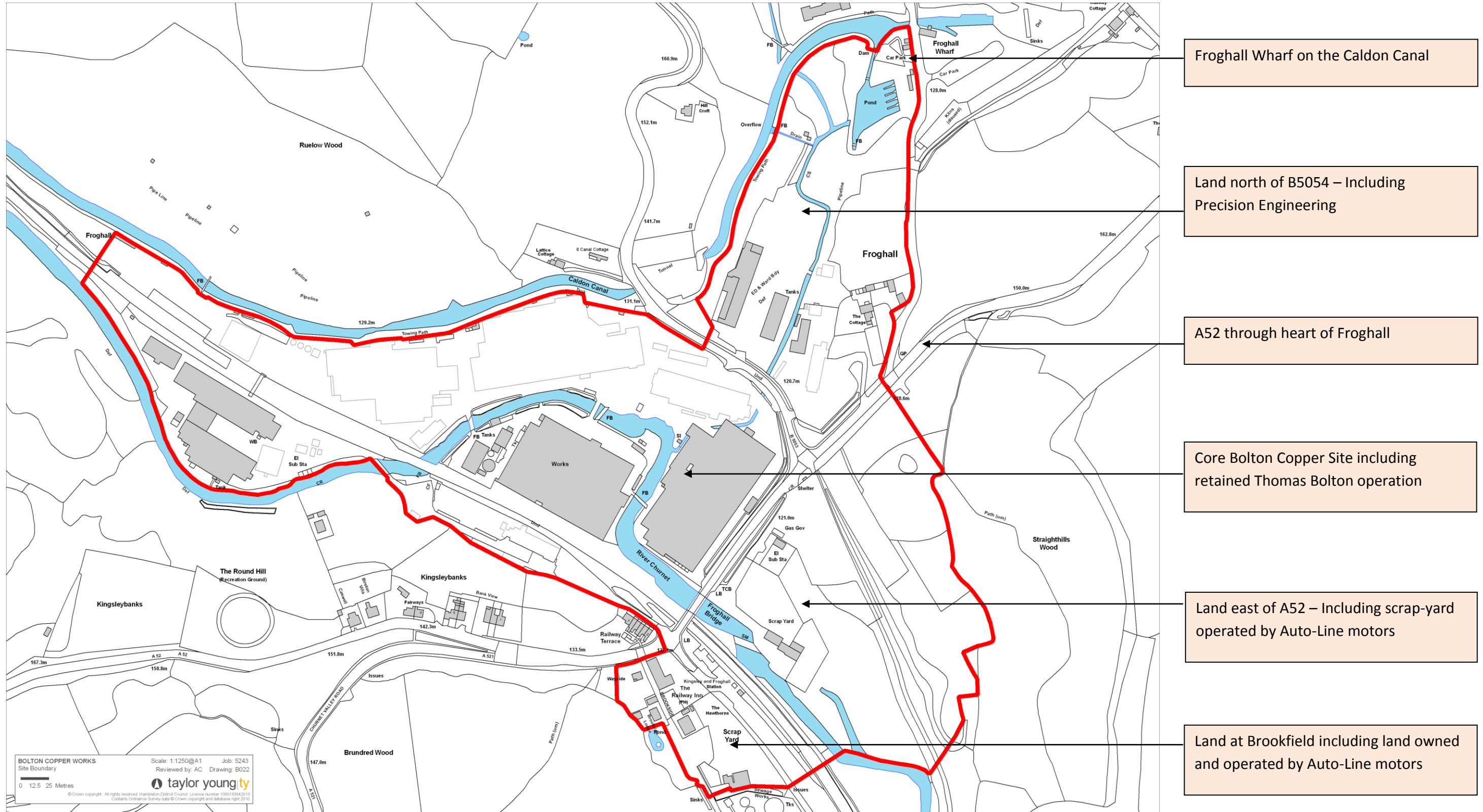


The Caldron Canal with the towpath to site edge



Long views into the site illustrating the green setting

Masterplan Boundary



4. Summary of Baseline Information

The baseline report was a snap-shot of key issues affecting the site in September 2010. The key issues remain consistent, albeit in the intervening time some of the buildings on site have been demolished by the sites owners. The baseline report includes the following:

- Planning Policy Context
- Urban Design Analysis
- Landscape Setting
- Commercial Development Analysis
- Transport Review
- Flood Risk and Surface Water Review
- Preliminary Geotechnical and Geo-environmental Review
- Review of Statutory Consultees Feedback on Withdrawn Application
- Summary of Consultations and Meetings

The baseline report is supported by a more detailed archaeological study, which was drafted in the light of an absence of available information at the baseline stage. This additional study provides further information for the masterplanning of the site and is appended to the baseline report.

The main findings of the baseline report (including updated findings from the separate archaeological study) are as follows:

- Froghall is a small village which includes a major previously developed site, now substantially vacant. In determining the scope for reuse of the vacant parts of the site, consideration will need to be given to the desired scale of the village in the future. In particular, the amount and type of new housing development, but also supporting uses for example shops, pubs etc. and also employment development and tourism uses. The tourism dimension is very important for the site and the wider Churnet Valley.
- Planning policy relating to the site establishes that the scale of any new housing development will need to be controlled and 'limited' to a level which is required to cross-subsidize desirable 'other' uses. These uses are considered to be those which relate to the specialist tourism offer of Froghall.
- This highlights a central concern and conclusion of the baseline report that the policy test for determining the appropriate level of residential development may be difficult to apply in practice given limited available information on ground condition and costs at this time. Current available information on ground conditions and costs for remediation do not provide this robust position and do not provide a solid platform to assess scheme viability. The masterplan needs to provide 'another way' of determining the appropriate quantum of residential development for the site.

- There is at this time, no robust or reliable cost assessment or assumptions upon which to assess viability. Whilst the additional archaeological study has begun to highlight key issues, it raises fundamental issues of gross contamination, buried structures and ground water contamination. Further more detailed and extensive intrusive ground investigation to confirm general and local sub-soil and groundwater conditions, and nature form and extent of remnant sub-structure, is required.
- The further more detailed investigation which is required to develop the necessary robust cost assessment / remedial strategy may confirm the (currently suspected) presence of gross contamination / risk to controlled waters triggering the requirement for remediation works to be implemented under Part 2A requirements, irrespective of whether any development takes place.
- Other constraints on the site also set a clear challenge to new development. These include; topography and levels between the site and canal; flooding specifically related to the River Churnet and Blackbank Brook; highway infrastructure and the retained industrial buildings in terms of access, noise and visual impact and industrial heritage, including the striking chimney to the west of the site. These constraints require a carefully considered response through site masterplanning.
- The waterspaces, heritage and green landscape setting should be key ingredients in any redevelopment. The success of the masterplan should be judged in terms of how well development responds to each of these themes. The scale and character of a new village-scape also needs to be carefully considered in moving from an 'epic' scale industrial site towards a more comfortable domestic grain.
- Commercially, residential is the strongest value generating sector and the site would be attractive to residential developers. New business development should play a part in regeneration but this does need to be carefully managed in terms of scale and delivery to ensure success. There may be limited commercial demand for tourism related development, but the public sector can lead this sector with commercial opportunities for a pub / restaurant and hotel and if the existing landowner / developer can deliver these, then this should be welcomed.
- There is an exciting opportunity to radically improve the landscape quality and village character at this scarred location. The site has fantastic assets in terms of its landscape setting, the river, the canal, Froghall Wharf and the protected historic buildings on site, but the derelict buildings and land dominate the area at present. The scope for restoration and creation of both the landscape and village will now be explored through development options.
- Thomas Bolton are to be incorporated into any masterplan and whilst there may be scope for reviewing how their ancillary activities (e.g. car parking) are provided the core operation is fixed spatially for the purposes of the plan.
- The heritage railway and the Caldon Canal are key assets for the masterplan process and need to be fully integrated in any redevelopment of the site. Active stakeholder groups should have a role to play in supporting regeneration in respect of the site from the railways and canals perspective.
- Key tourist and visitor attractions come together and converge at Froghall which is a relatively accessible location well served by the road network. This presents an opportunity to create a tourism gateway which would be an improved arrival point in the Churnet Valley.

5. Summary of Options Development

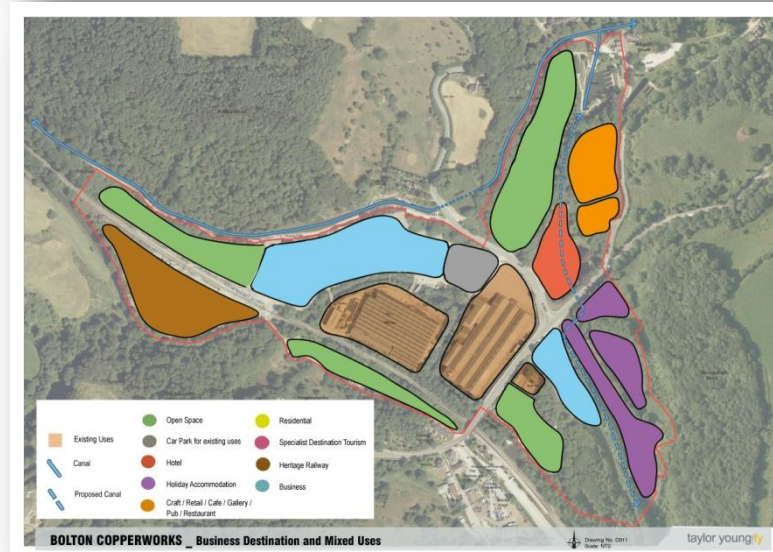
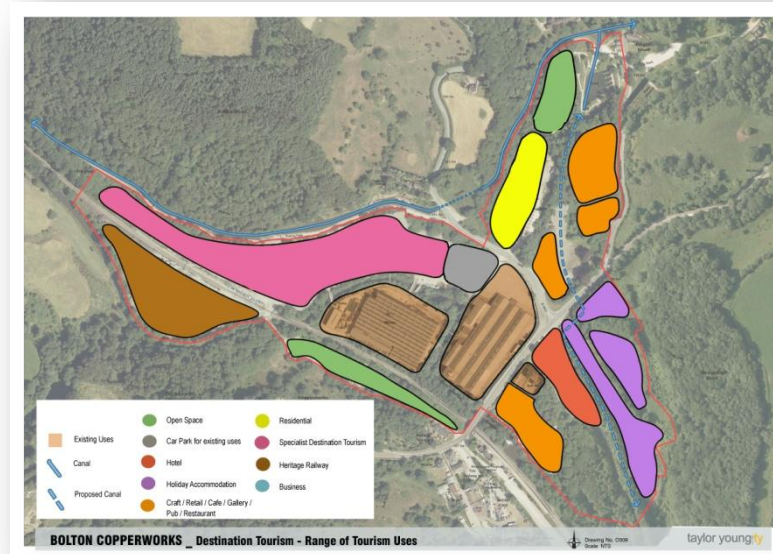
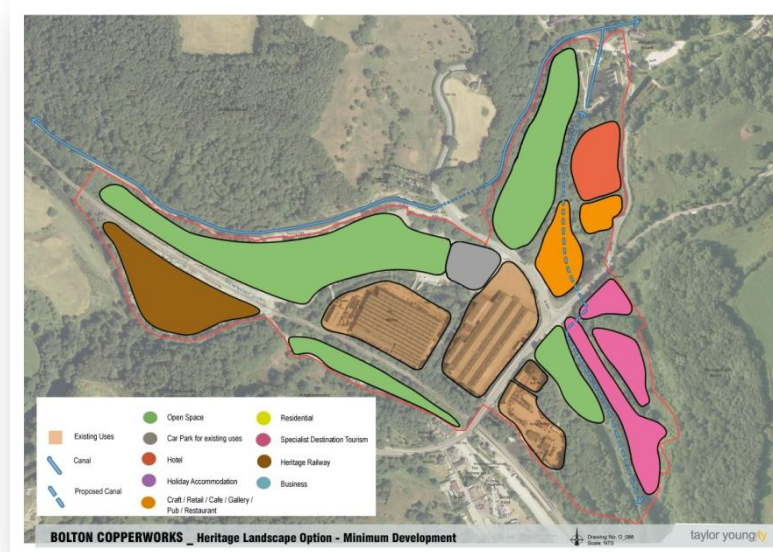
The Options Report (appendix 2) summarises detailed work on a wide range of options. In total, ten separate options were considered, culminating in a hybrid option, which reflects a preferred way forward. This hybrid option has been developed into the final masterplan.

Each option was reviewed in terms of the following issues:

- Sustainability – Is the option likely to be environmentally sustainable?
- Viability – Is the option likely to be economically viable?
- Deliverability – Is the option deliverable considering complexity, owner’s aspirations and planning?
- Tourism benefits – Is the option likely to deliver tourism benefits in terms of uses and attractions?
- Job creation – Is the option likely to deliver new jobs and sustain existing levels of employment?
- Environmental Quality / Place making – Is the option likely to enhance the existing landscape and create a quality new place?

The preferred option has formed the basis of a final round of technical assessments and scrutiny by the consultant team, particularly in terms of urban design, commerciality, tourism destination, ground conditions and delivery issues. The preferred option is described within the Options Report and this has evolved into the final masterplan it would be confusing to describe this option at this point in the final report.

It is important to recognise that the options work included three separate workshops, involving separately council officers, local stakeholders and elected members. The final masterplan has also undergone a further round of consultation with elected Members. It has been important throughout this process to involve elected members in the evolution of ideas. Whilst the final masterplan may present a challenging agenda for change, it reflects the wide-ranging comments made through the masterplanning process.



Selected options drawings from the options report, including from top to bottom; Heritage Landscape Option, Destination Tourism Option and Business destination Option



Photography from options workshops



6. Strategic Perspective

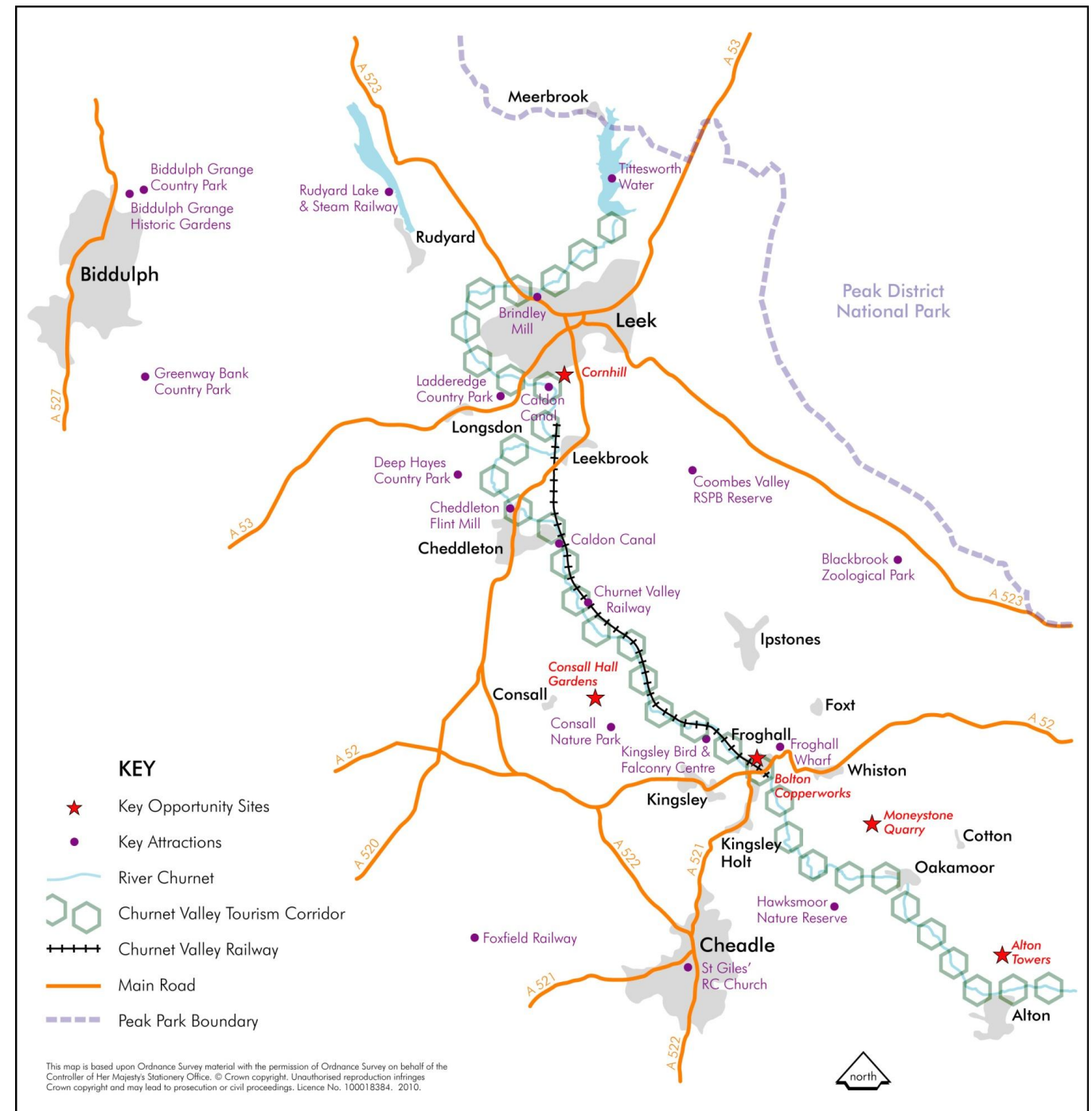
The Churnet Valley as a stronger Tourist Destination

As the masterplanning for the Bolton Copperworks Site has evolved, a wider Churnet Valley tourism strategy has been developed. There has been good cross fertilisation of ideas between the two projects and an aligning of views.

From a strategic ‘valley-wide’ perspective, the Bolton Copper Site is seen as having significant assets which make it a special tourist destination. There is potential to strengthen the tourism potential of this area in the future, building on existing assets of the heritage railway and the Caldon Canal and Froghall Wharf. Moreover new investment could help create a new arrival point within the Churnet Valley providing orientation, key facilities and telling the storey of the site and wider valley.

It is vital to support and enhance the existing tourism facilities. The heritage railway should be supported in respect of operational land for the maintenance of rolling stock and engines on the Bolton Copper site. The setting of the railway station should be enhanced. Creating more to do for tourists in Froghall will also strengthen Froghall as a destination and support a fuller and more robust tourism experience. The wharf and canal are also very important and the masterplan promotes the demarcation and preservation of the alignment of the former Uttoxter canal and its associated locks. Boaters’ facilities at Froghall Wharf could be enhanced and with more to see and do in Froghall more boaters would make the trip to the wharf.

Add to this a proposed new tourism development and Froghall would see a step-change in its attractiveness as a tourism destination. Uses are envisaged to include, an orientation / visitor centre reflecting the heritage of the valley and the site, alongside craft retail units and a communal gallery and cafe. There is scope for the redundant mill chase to be used to generate energy for this new building and this could be part of its visitor attraction. This development may be – to some degree – cross subsidised by value generating development but any such private investment will need to be part of a wider public sector commitment. In any event such development requires a sustainable business case going forward. On a more commercial basis there are proposals for a pub / restaurant with overnight accommodation, including refurbished buildings around the farmstead at ‘Froghall House’.



Key Attractions and Opportunity Sites within the Churnet valley

Rural Housing Agenda at Froghall

Much discussion and debate has centred on the amount of residential development which should be provided on site. Options work has explored contrasting approaches including no residential development right through to substantial housing levels in excess of 250 dwellings. The masterplan seeks to balance planning issues of sustainable development, local housing need, aspirations of site owners' views of local communities and elected members and also the ambition for a mixed and viable development. The existing scale of Froghall is an important consideration and the need to work within the character and scale of the village and not swamp the village with housing on mass is very important. The key issue will be one of balance and quality.

It is clear that the site should not be redeveloped solely as a large housing estate. A mix of uses is needed. Also, a mix of housing and this is not seen as a high density urban scheme. The grain should reflect the village setting. The balance of houses should be larger detached dwellings which can meet a particular need locally for higher value housing. The quality of new homes is vital and these should avoid uniformity and reinforce local character.

The approach taken has been to define residential zones and to assume appropriate lower end densities (of 25 dwellings per hectare and fewer) to generate a range of suitable housing. Reviewing areas where residential use might be acceptable, the upper limit of housing within the former Bolton Copperworks site would be around 105 units. There will be scope for further homes outside of this ownership at Brookfield, and this would be in the order of 25 homes and would support the relocation of the scrap yard. So overall, around 130 dwellings as an overall ceiling, with developers free to deliver fewer larger houses as market conditions direct.

Housing numbers should not be defined solely as the basis for securing values for cleaning-up and making-good of the site. This obligation should be borne by the polluter / landowner. A case for 'enabling residential' development may be reasonably made in order to meet some remediation costs, to help cross-subsidise tourism related development (as set out in local planning policy) and to achieve outcomes which might otherwise prove undeliverable; for example the relocation of the scrap yard.

It is therefore sensible to locate residential development on parts of the site which are understood to be the least contaminated. This will minimise the costs of the development. Given the range of other costs generating items on this site it is suggested that this site should not be seen as an opportunity to deliver rural affordable housing. The aim should be to define a viable and comprehensive scheme within the parameters set out above.

Rural Regeneration and Employment

The retention of the Thomas Bolton operation on site is very important as this supports many jobs and contributes to the local economy. Likewise other existing businesses on and around the site should also be retained through the redevelopment of the site. The masterplan includes extensive areas of new employment land which can provide a home for new and relocated businesses. Green technologies and recycling are seen as themes which might brand this employment destination, alongside the anchor operator Bolton Copper.

Whilst tourism, leisure and residential development will all support regeneration activity and investment in Froghall, direct investment in job creation and employment development should be specifically encouraged. Evidence suggests that this sort of development will be challenging to deliver on a commercial basis, at least initially and so the public sector will need to play a key role supporting regeneration and investment in business creation.

A pub / restaurant with its overnight accommodation and a visitor centre with its associated cafe will all support local job creation. The craft / retail units are very much seen as 'making and selling' independent outlets for local craft people and artists. This concept needs to be explored further and appropriate comparator models explored. An example development is Ruthin craft centre (image below from 'Flickr') which provides work and sales space, a central gallery and restaurant.



7. Key Masterplan Principles

7.1 Taking a Comprehensive Approach

The masterplan provides an opportunity to consider how change at a village scale will deliver value added above and beyond individual ad-hoc development. The key issues here include:

- Focus on place-making at the village scale and not the site specific scale. Site work needs to be undertaken within the context of this strategic masterplan.
- Secure the remediation of the core Bolton Copper site, which will have limited commercial value but which requires significant remedial and landscape works.
- Identify niche markets for high quality, high value and specialist uses across different sectors to make Froghall a place of choice.
- Within this context focus on high quality design.

7.2 Strengthen the Tourist Destination at Froghall and Creating a new Tourism Gateway

This will involve:

- Connecting and strengthening the tourism assets of Froghall Wharf and the Caldon Canal and the heritage railway and the railway station at Froghall.
- Create a new tourism gateway at Froghall in terms of a distinct place to arrive for tourism and recreation.
- Providing plentiful car parking with excellent visitor facilities well signposted as a hub for the Churnet Valley and to support new and existing facilities.
- Tell the story of the site and valley through a dedicated visitor attraction located in Froghall.
- Securing a high quality pub / restaurant in a format which can meet modern needs and which can include overnight accommodation.

7.3 Consolidating the Village

This will involve a number of actions including:

- Creating new residential opportunities of a scale and type which will enhance rather than detract from Froghall.
- Creating a distinctive focal point for Froghall in terms of public realm as part of a wider scheme of environmental improvements
- Develop a more robust rural economy in Froghall by developing a new employment area which can attract new inward investment.

7.4 Enhancing the quality of the environment

The key aspects of this include:

- Rediscovering the riverside through changes in use and environmental works.
- Maximising the existing and potential value of the canal as an environmental asset.
- Enhancing public realm within the village, including calming the A52 which runs the village, which needs to be made much more pedestrian friendly.
- Securing appropriate remediation of previously developed land and improving environmental quality.
- Environmental improvements to existing industrial buildings
- Reuse and conservation of heritage townscape across the site

7.5 Generating and supporting job opportunities

This would include:

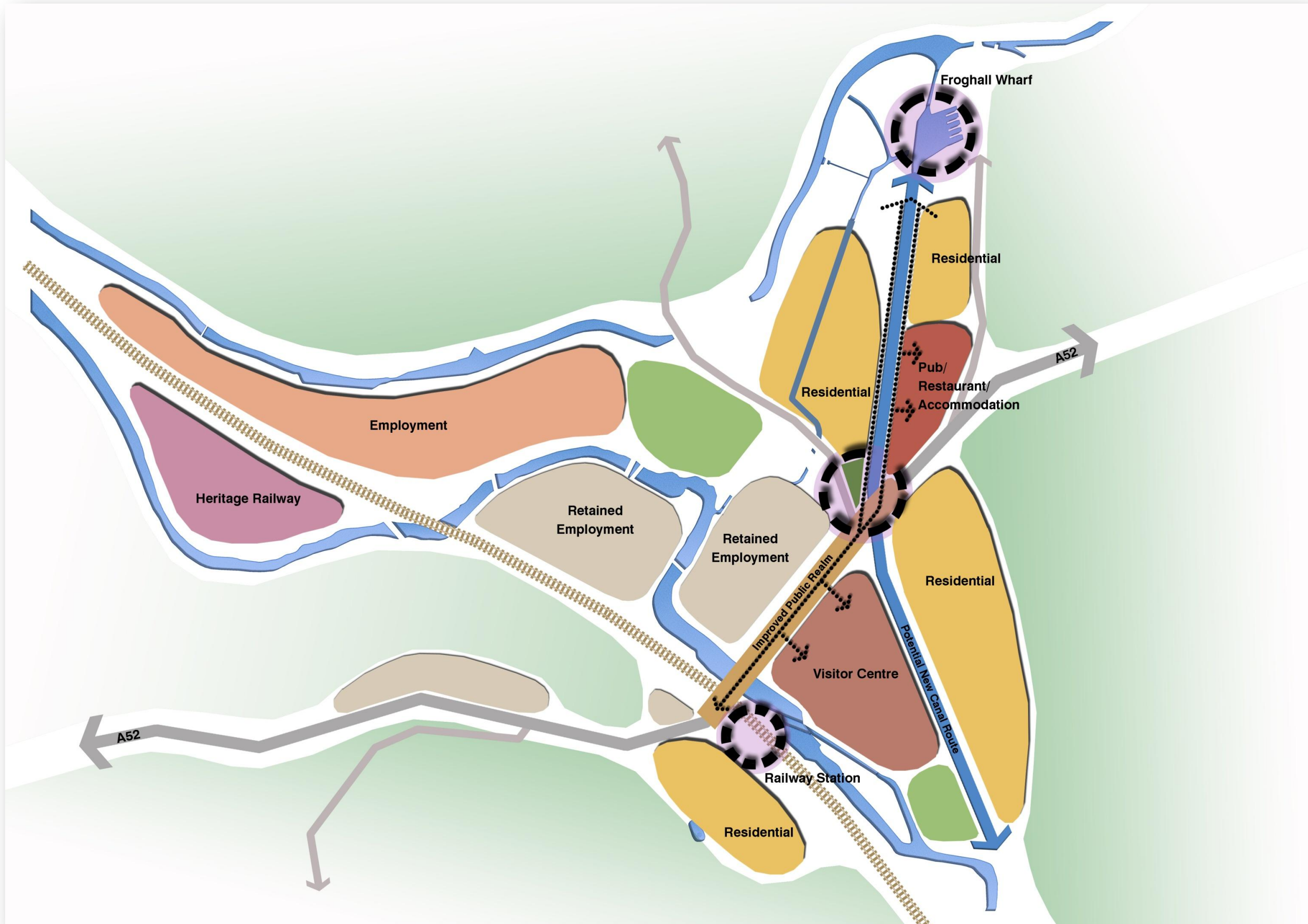
- Safeguarding the Thomas Bolton operation on site.
- Safeguarding jobs locally by providing land for relocations where other uses are proposed for land currently in use for employment purposes.
- Creating a new employment park, with a green technology theme, anchored by Bolton Copper and relocated businesses and located on the core Bolton Copper site.
- Promoting more diverse jobs in Froghall through tourism and leisure.
- Supporting railway related development on the core Bolton Copper site associated with the heritage railway and its operational requirements.

7.6 Responding to site constraints in a creative and pragmatic manner

This is a challenging site which has multi-faceted constraints and where a standard development approach will not deliver the desired outcomes. This will include:

- Locating residential development away from the worst known contaminated parts of the site to reduce the requirement for remediation.
- Locating business, commercial and other non residential uses, including open space, on the parts of the site which are understood to be polluted and constrained from an operational perspective in respect of Thomas Bolton.
- Acknowledging that there are real operational constraints and impacts from the current Bolton Copper operation which mean residential development close by would not be sensible.
- Taking a flexible approach to green space and trees within the area to ensure most trees and green areas of value are retained, but accepting that there will need to be some loss of green space and trees to deliver development. This would need to be compensated for through development proposals which should include high quality landscape treatment.
- Taking a creative approach to flood risk and locating car parking, employment and visitor attractions within the flood zones to make most effective use of available land.

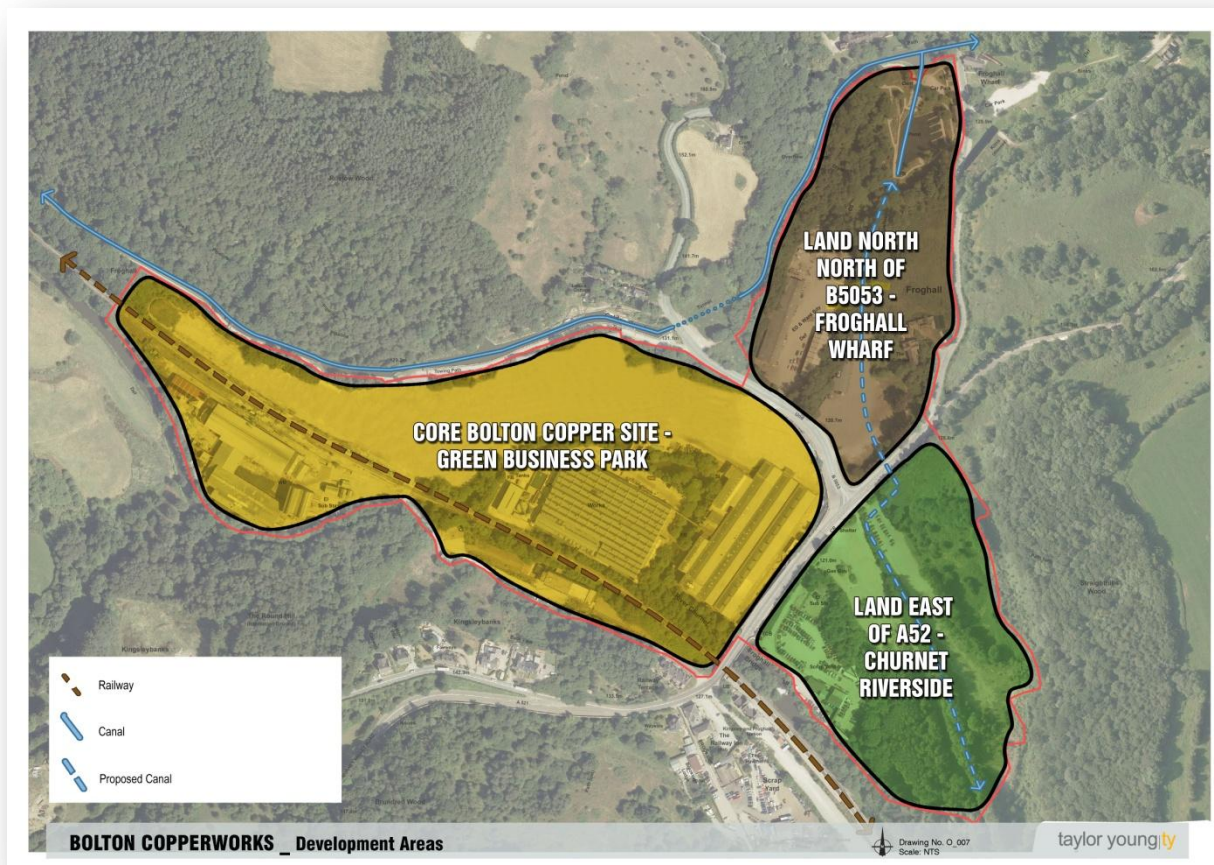
Urban Design / Development Concept



8. Development Areas and Potential Outputs

The masterplan adopts a comprehensive approach, but for ease of explanation the plan is broken down into three areas as follows. Each is then described in turn.

- Land north of B5053 – Froghall Wharf
- Land East of A52 – Churnet Riverside
- Core Bolton Copper Site – Green Business Park



Froghall Wharf – Land north of B5053

This site is characterised by rising levels and significant green spaces and mature trees. This is an area where ground conditions may be more favourable albeit the former Uttoxeter Canal is buried in this area so there may be some unusual costs. The need to protect an alignment for a reinstated canal is both a constraint and opportunity here. There is also a need to accommodate overland flood water from Black Brook, which runs towards the River Churnet from the north. Development parcels reflect existing levels and retain a good proportion of existing trees and landscape. The brook is shown realigned to follow the route / flow of the brook in flood. The canal alignment is shown reinstated in the masterplan and access to the majority of the site and uses is via the B5053. The area includes two residential zones (1 and 2) and a pub / restaurant with associated holiday accommodation above / within the pub and also in a self-contained annex in Froghall house and its outbuildings (which are grade 2 listed).



Residential Zone 1

- 1.34 Hectares
- 34 homes = 25dph

Residential Zone 2

- 0.47 Hectares
- 12 homes = 25dph

Corner site / Former Froghall House

- Pub restaurant (418m²)
- Accommodation (10xB&B rooms / 10xholiday apartments)
- 30 car parking spaces shown

Churnet Riverside – Land East of A52

A key aim for this part of the site is to create a new tourism arrival place and focal point. There is also potential to create a significant residential development in this area. The mature landscape and riverside are key features in this area and new development will need to enhance and respond to this context.

At present the riverside is lost and the site is dominated by the scrap yard. Relocating the scrap yard would allow this site to be opened up for public enjoyment and this would transform the heart of Froghall opening up the riverside. To create the wider development opportunity, operational car parking for Thomas Bolton will need to be relocated onto the core site.

The proposed visitor facilities here would be of significance for the whole Churnet Valley. This would include an orientation centre telling the storey of the valley and the site with key information. Alongside this is envisaged a gallery and craft / retail units. A cafe would also complete the attraction. Car parking would be provided for the centre and tourists more generally within the site. There would be green spaces including picnic areas and terrace to the cafe looking over the river. The whole centre would be highly visible and distinct from the main road and from the railway station. It is envisaged that the architecture of this building would be strikingly contemporary and include copper as a theme. There is also scope for a renewable energy exemplar utilizing hydrological energy from the mill chase. (See image below - JCB Academy, Rocester, East Staffordshire - 80% of buildings electrical energy supplied by Archimedes Screw on mill chase on the River Dove.)



The relocation of the scrap yard is important to the delivery of the visitor centre. Relocation could be onto the main Bolton Copper site or elsewhere away from Froghall. The scrap yard / recycling business has two sites in Froghall and these should be considered together. Importantly the site at Brookfield (zone 4) should be released for residential land to generate value for relocation off both sites.

Further significant residential development is also proposed in this area (zone 3). This is at the higher level away from flood affected areas and amongst the existing mature landscape which should be seen as an asset for development and retained wherever possible. The residential area is also affected by rising land and mature landscape and trees which should inform the design response. The alignment for the reinstated Uttoxeter canal also needs to be maintained through this site and again the design must respond positively to this.

Conkers Discover Centre (below) in the national Forest provides inspiration for the kind of development which might take place on the site at Bolton Copperworks. (image from Flickr). The Ludlow Food Centre (below right) shows another distinct tourist destination, reflecting local distinctiveness in that location picking up food production and quality produce.



Visitor Centre – 2,000m2 footprint

- Learning / orientation centre = 500m2
- Cafe = 500m2
- Gallery = 300m2
- Craft / retail units = 700m2 (7x100m2 units)
- Site = 1.34Hectares
- 220 car parking spaces

Residential Zone 3

- 2.36 Hectares
- 59 homes – 25dp

Residential Zone 4

- 0.92 Hectares
- 23 homes - 25dp



Green Business Park – Core Bolton Copper Site

The site would be remediated to an appropriate level which is envisaged to include as necessary removing foundations and re-grading the site to deliver logical development sites. The site would be accessed along a spine road which would connect to the B5053. This would include new formal access into the operational area of Thomas Bolton and also their replacement car parking (scale to be agreed).

The employment areas would be broken down into two distinct parts including an area for business relocations, including the scrap yard / recycling business (Auto-Line Motors) and Precision Engineering. The balance of the site would be developed for employment / business uses with the idea to promote green energy, continuing the recycling theme. Commercial advice suggests that around one hectare of new employment / business space might be seen as sensible.

The heritage railway land is intended to provide a location for the maintenance and upkeep of the lines, rolling stock and engines and could provide space for a business to maintain heritage railway related engines and rolling stock as a business operation. This is a concept put forward by the heritage railway and was supported through the options work. There may also be scope to combine this with the commercial utilisation of the line relating to the Moorland and City Railway. In any event, this would not be a visitor destination and would be an operational concern.

The design of the employment site and the heritage railway area includes the potential for emergency access via an alternative route to the spine road should that be blocked / inaccessible as would be required by the highway authority. This would connect to the A52 via the existing bridge links and past the run of cottages. The whole employment area should be landscaped to a high quality and buildings should be well designed and sympathetic to the landscape setting. The fact that the existing Thomas Bolton buildings are visually unattractive and function should not be a precedent for more of the same development.

Heritage Railway Area

- 1.12 hectare site

Employment sites – 2.1 Hectares

- Land for business relocations = 1.1 hectares
- Land for new employment = 1 hectare



High quality landscaping and employment buildings, Speke Merseyside



Offices and employment buildings in rural Staffordshire, Lancaster Park, Nr. Burton upon Trent

Summary of development outputs

The key outputs are as follows:

- A visitor centre with orientation centre / gallery / craft retail centre / café within a building of footprint 2,000m² on a site of 1.34H, with 220 car parking spaces
- Pub restaurant with a footprint of 418m², associated holiday accommodation (including 10xB&B rooms / 10xholiday apartments) on a site of 0.59H, with 30 car parking spaces.
- Up to 130 dwellings (including a significant proportion of larger family homes) of which up to 105 would be on the former Bolton Copperworks site.
- 2.1 Hectares of employment with 1.1 Hectare of land for business relocation and 1 Hectare of land for new space) giving a balance of +1Hectare
- Heritage Railway land of 1.12 for operational activities associated with the railway.



PRELIMINARY

BOLTON COPPERWORK

PREFERRED OPTION

Scale: 1:1250 @ A1
 Reviewed by: AC

job drawing rev
 5243 SH(81)101 -

taylor young ty
 chadsworth house
 wilmslow road
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 www.tayloryoung.co.uk

architecture
 graphics
 healthcare planning
 interior design
 landscape architecture
 regeneration
 town planning
 urban design
 3D visualisation

Artists impression



9. Infrastructure and Place-Making Requirements

Much of this masterplan focuses rightly on development and the uses of different parts of the site. This is important to assist Staffordshire Moorlands defining an appropriate mix and quantum of development. However, alongside this, the masterplan does need to include strong guidance on the range and type of important public realm, landscape and infrastructure works. These works are vital to create a high quality place for tourists, residents and workers.

Infrastructure and landscape design need to be considered together to ensure that investment in new spaces and places is not undermined by the provision of standard infrastructure. Hence the list is considered together, as follows:

- **Traffic calming** through Froghall. This should include gateway traffic calming features and signage at the threshold of the village and other changes in material and signage. The aim should be to slow traffic before it reaches the heart of the village.
- **Street improvements** through the heart of Froghall focused on the A52 between Brookside and the junction with the B5053. This should include a narrowed carriageway and renewed surfaces for the carriageway and footway. The railway / river bridge raises a particular challenge in that it is narrow and 2 metre footways may not be possible on both side of the carriageway. Further work is required to investigate the scope of these works. Improvement works should also be included for the railway station approach, the section of the B5053 past the gateway to proposed residential development and the A52 between the junction with the B5053 and the junction at the fork in the road leading to Froghall Wharf / Kingsley.
- **Review of traffic related signage** and paraphernalia with a view to relocating large signs and unnecessary clutter away from the heart of the village. For example, there is a large highway sign at the junction of the A52 and the access road to the railway station. This impedes pedestrian movement and creates a highway dominated feel.
- **Local way-finding** signage needs to be developed to help people, particularly tourists to find their way to key tourist destinations including Froghall Wharf (Caldon Canal), the Railway Station, the new visitor centre (etc.) This should be part of a clear way-finding strategy for Froghall, including a consistent theme of appropriate signage and name plates etc. This should also include replacement and much better gateway signage to Froghall, noting 'Froghall, at the heart of the Churnet Valley'.
- **Environmental improvements to the site boundary** to the Bolton Copper site along the A52 and B5053. This will involve the replacement of the existing concrete post and panel fence with a more attractive and less industrial boundary which is none the less secure and robust but which creates a more appropriate impression within the village.
- **Façade improvements** on the Bolton Copper site to the prominent frontage building addressing the A52 and at the corner of the A5053. This could include the renewal of cladding on these prominent building.

- **Significant junction improvements to the junction of A52 and B5053** including the formalization of a new site access to land to the east to for the proposed visitor centre and visitor car park.
- **Formation of new access egress into the proposed residential plot to east of the A52** and north of proposed canal alignment. This will provide independent access into this plot and would be separate to the access / egress to the visitor centre.
- **Formation of access / egress from the A52 into the site at Brookside** to enable the redevelopment of this site for residential purposes. The current access is narrow and constrained by the vacant pub and adjacent modern dwelling.
- **Formation of two new site accesses / egresses to service land and development to the north of the B5053.** This would enable access into two development plots from the B5053.
- **Formation of new site access to main Bolton Copper site proposed as new green business park, including gateway signage and branding.** This will provide public access to the site and would be followed by the creation of a spine road to serviced plots within the core site at a later stage. This project would also include a remodeled secure site entrance to Thomas Bolton's. At this stage the green space at the gateway to the green business park would be created and gateway public art installed at this location with copper as the theme.
- **Creation of a canal corridor** as a key public route and pedestrian spine through the site connecting Froghall Wharf to the heart of the village (see plan for alignment) at the B5053. This will link into the railway station and proposed visitor centre via improved public realm. In masterplanning terms there is a strategic requirement to preserve the alignment of the historic canal corridor in order that in the future the canal could be reinstated. This project will ensure land preserved for this route contributes strongly to connectivity. The scheme would not include a new canal itself but would include a wide pedestrian route and the space created would include landscape design details (e.g. steel trims edging extend of canal and locks) to tell the story of the canal and illustrate its location.
- **New green space in heart of Froghall** at the junction of the A52 and B5053. This is a central location and is a natural heart for the village. A small village green at this location would provide a distinctive focal point. The space would act as a way marker from the train station and help to link the station with the wharf via the public realm (canal) link described above. This is also a difficult site to develop and so investment in a small but high quality open space at this location would be sensible.

Re-alignment of Black Brook including the restoration of the watercourse at site level and the de-culverting of this watercourse. This is primarily a development proposal to enable the course of the brook to follow a logical alignment through the development site which also follows the lower parts of the site which are affected by overland flooding.

This long list of projects needs to be reviewed alongside development projects and distilled into a phased and realistic package of works. Costs for these works would be borne by a mixture of funding sources including the development (developer) and/or the public sector? Cost assumptions for public realm works are given at a high

level and are based on basic assumptions of the costs involved. This is not broken down project by project as further work is now required to ascertain this information. Given the prevailing economic climate it will be important to value public realm works to help create a new place at Froghall and not see this work as a luxury item. Environmental quality is crucial to creating a place where people will want to live, work and visit.



Broad budget costs for public realm works might be expected to include:

- Traffic / highways related infrastructure = £300,000
- New / Improved public realm (including canal route) £550,000
- Envelope improvements to buildings and boundaries to Bolton Copper £100,000
- Overall environmental / infrastructure costs (approx.) £950,000(-£1m)

Substantial improvements are proposed to pedestrian realm and the street environment throughout Froghall. These will help to calm traffic. Potential funding for this work could be derived from existing programmes and revenue streams as well as the development. The benefits to existing and new residents should be recognised.

New and improved accesses / egress serving sites will need to be provided and these will need to be agreed in detailed at the appropriate stage in the design process. The masterplan team have indicated potential access and egress to the various sites.

Flood Risk

The masterplan shows development on land in Flood Zones 2 and 3, based on both the Strategic Flood Risk Assessment Flood Zone Mapping and the most current Environment Agency Flood Map. The acceptability of development in these areas could be acceptable in principle providing successful the application of the Sequential Test. Also, the implementation of appropriate mitigation measures such as floodplain storage compensation, flowpath compensation and the provision of a safe access routes etc. will need to be considered. As part of the masterplan, suitable areas are allocated to provide such mitigation. These include car parking areas, hard standing, green spaces and public spaces.

The masterplan drawing shows a diversion of Black Brook and the breaking out of the brook from its existing Culvert. The EA will welcome the de-culverting of this brook, but will need to be satisfied that the new channel provides adequate conveyance, has a suitable access strip for maintenance and inspection purposes and has no detrimental impact on flood risk elsewhere. This 'nil detriment' will need to be demonstrated through hydraulic modelling of the masterplan proposal compared to the baseline (existing) scenario.

Remediation and Ground Water Issues

Site remediation and potential ground water contamination are key issues and cost items for the delivery of the masterplan. There is limited factual information available at this stage based on the work undertaken through the masterplan. Statutory requirements are clear however that key actions will be required to ensure remediation and ground water are addressed in an appropriate manner. More information is provided within Appendix 1 regarding specific requirements of the regulations. In summary however, it is envisaged that remediation costs for land, buildings, foundations, soil and water will be substantial and will require specialist consideration under any development scenario. Indeed monitoring and assessment work may be required in any case, regardless of whether development comes forward or not.

10. Viability / Development Appraisal

Ground Conditions Assumptions

Through the course of this work it has not been possible to define in even the broadest terms robust costs associated for remediation of the Site. The scale and nature of contamination on the site remains uncertain. The principle to which the Council needs to adhere to is that even where contamination costs are high or increasing, this should not of itself create a basis for justifying an otherwise unacceptable use or quantum of use. Value generating uses will have a role to play in helping to deliver a viable scheme on this challenging site, but allowing remediation costs to drive scheme content is not a basis for sound planning. Contamination associated with a previous use cannot be a basis in itself for justifying high value uses on a site such as this.

For the purposes of appraising the masterplan, the following levels of contamination and risk have been identified:

- High Risk – very intensive activity required to remediate contaminated land.
- Medium Risk – significant extra costs are likely for site remediation.
- Low Risk – some extra costs are to be expected but of a minimal nature.

There will be different types of development and for simplicity the following assumptions are made:

- Residential uses will require a very high level of remediation.
- Non residential uses will require less intensive and marginally less expensive remediation.

Masterplanning principles seek to ensure residential uses are not included on any land which is suspected to be of High Risk of contamination. Peter Brett Associates who have provided inputs to the masterplan on ground conditions are not able to provide cost rates for remediation based on the information forthcoming. Further work is required to quantify realistic cost estimates. To provide a very broad reference point an indication of likely costs and cost differences is provide below but it is VERY IMPORTANT THAT THESE FIGURES ARE NOT SEEN AS IN ANY WAY CLOSE TO REAL COSTS and they are provided as indicative only and will not be indemnified in any way as part of this masterplan. They enable the broad development appraisal for the final masterplan to be set against likely additional costs. The table below explains our approach:

Level of Risk	Residential uses (all) £/Hectare to remediate	Non residential uses £/Hectare to remediate
High Risk	£725,000 (or even higher)*+	£525,000*+
Medium Risk	£400,000*+	£325,000*+
Low Risk	£175,000*+	£125,000*+

*Indicative only and in no way reflective of the real costs of developing this site.

+ Excludes costs for ground water costs associated with ground water remediation as follows £/Hectare:

- High Risk Areas = £562,000
- Medium Risk Areas = £468,000
- Low Risk Areas = £375,000

The potential additional costs to treat contaminated ground water to ensure it does not pollute the River Churnet will add substantially to these remediation costs based on the unit rates above. These costs are seen as being carried by the polluter and are not seen as development costs in themselves. If they were to be considered development costs then that would render development unviable. The headline indicative costs below for each parcel of the site set the broad remediation costs assumed in the development appraisal.



Remediation costs for the site are expected to be high but this is not seen as a driver of development quantum

Masterplan Development Assumptions / High level Potential Remediation

Residential Zone 1

- 1.34 Hectares
- 34 homes (25dph)
- Potential remediation cost (medium risk) = £536,000

Residential Zone 2

- 0.47 Hectares
- 12 homes (25dph)
- Potential remediation cost (low risk) = £82,000

Residential Zone 3

- 2.36 Hectares
- 59 homes (25dph)
- Potential remediation cost (medium risk) = £413,000

Residential Zone 4

- 0.92 Hectares
- 23 homes 25dph
- Potential remediation cost (medium risk) = £368,000

Heritage Railway Area

- 1.12 hectare site
- Potential remediation costs - high risk = £588,000

Visitor Centre / Craft centre etc.

- Site area = 1.34 hectares
- Potential remediation costs (high risk) = £703,500

Pub / Restaurant / Accommodation

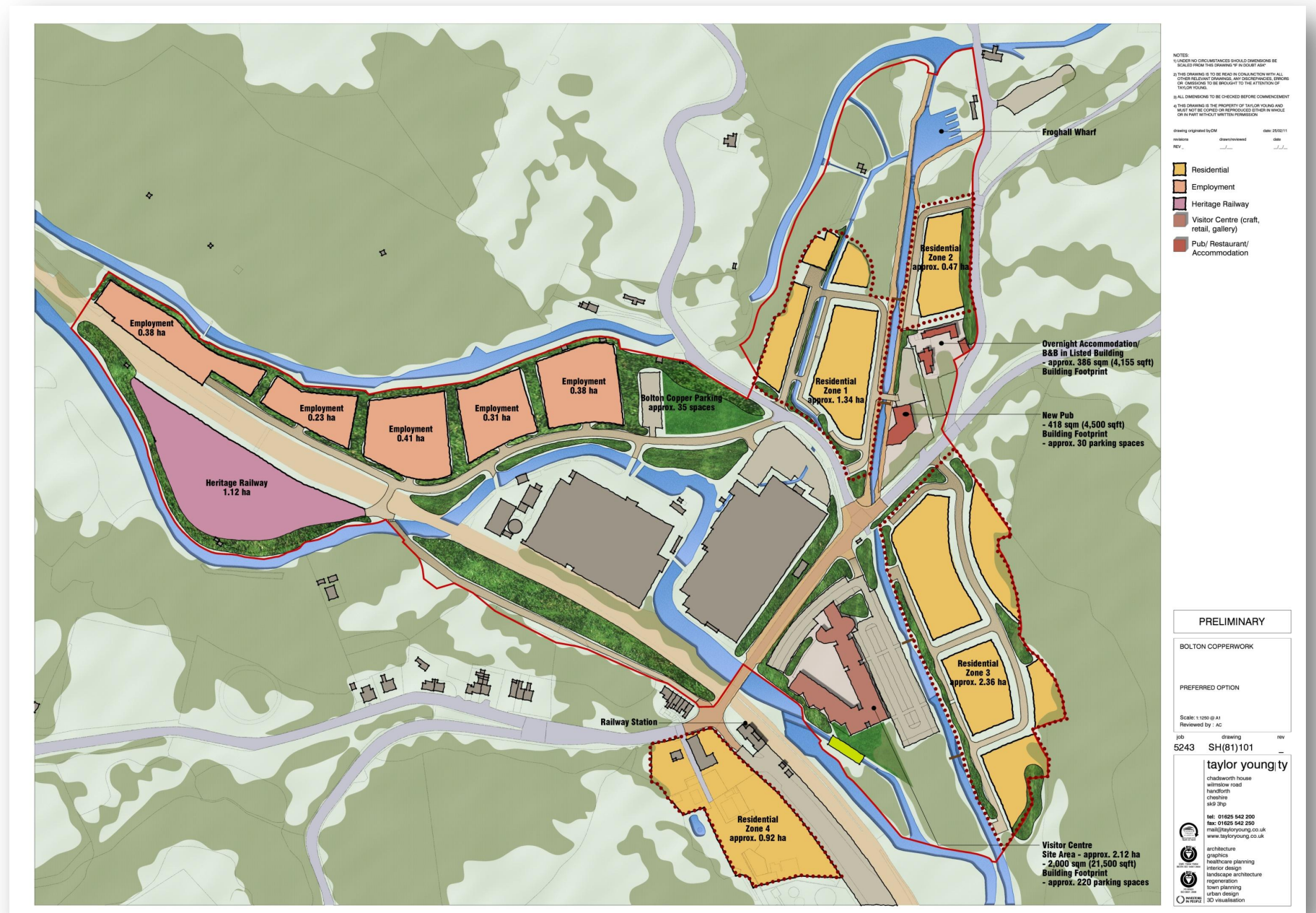
- Site area = 1.34 Hectares
- Potential remediation costs (low risk) = £73,750

Employment sites

- Site area = 2.1 Hectares
- Potential remediation costs (high risk) = £1,102,500

Summary of Development Appraisal

The development appraisal and associated assumptions for the masterplan are shown across the page. Gross development value includes all of the value generating elements of the scheme. This includes the residential development with no affordable housing. It also includes the employment development and the pub / restaurant. No value is generated from the visitor centre as it is envisaged that this will be delivered by the public sector and that revenues generated from this would be used to sustain the facility. A whole host of development costs (including remediation costs and infrastructure costs as set out above) as well as developer contributions (s106) and finance costs have been assumed as has a developer profit at 15%. Overall this results in a residual land value at £342,381. The sensitivity analysis alongside the core appraisal demonstrates how values might increase with different cost and value assumptions (see appendix 2 for full development appraisal).



11. Delivery Issues

This section of the masterplan summarises delivery issues and potential routes towards the redevelopment of the Bolton Copperworks site and the implementation of the vision for Froghall. The masterplan does not intend to provide a detailed road-map to site redevelopment and delivery will need to be considered in detail as a next step to this work.

The sites and proposals identified through masterplanning impact on a number of key stakeholders including:

- Staffordshire Moorlands District Council – Planning and regeneration
- Sterling Investments as landowner of the main site (Bolton MKM Estates LLP)
- Auto-Line Motors as landowner of the scrap-yard site and the Brookfield site
- Thomas Bolton as the main operational business on site
- Precision Engineering as another operation business on site
- Churnet Valley heritage Railway
- Caldon and Uttoxeter Canal Trust
- Staffordshire County Council
- Environment Agency

Land ownerships affecting the masterplan involve two key interests. In regeneration terms this is low number of landowner interests, but clearly their aspirations and interests are central to positively delivering the vision. The two key land owners are Sterling Investments and Auto-Line Motors. To fully realise the masterplan both owners need to become involved in the plan positively.

The lack of publicly owned land limits direct intervention by the Council. But the public sector does have two roles aside from potential direct ownership whereby it can influence and induce and control development. Firstly through its planning powers. Planning permission for new uses can raise the residual value of the land and defining an acceptable framework of uses value creation can help to fund the vision. Establishing an acceptable framework of uses can also stop land speculation. Secondly, the Council can provide a focal point for public sector regeneration investment, through direct activities, and through its ability to draw together public funding opportunities to support regeneration. The Council needs to communicate three things in this regard to the landowners and wider delivery stakeholders.

- First, the Council wants to work positively with landowners to deliver a new place which provides acceptable solutions for all involved in the development process.
- Second, that within this positive context, this masterplan provides the development framework for the site and other plans or proposals will be judged against this.
- Third, the Council is committed to delivering regeneration on the site and this may involve direct public investment by the Council, HCA or other funding sources. Regeneration of this site is a key priority even in difficult economic conditions.

Delivery of the masterplan will ultimately be led by the site owners and prospective developers, but will require very substantial support from the public and third sectors. Housing, employment and the pub/restaurant will be developed by the private sector. The railway works will be developed, managed and maintained by the Churnet Valley Heritage Railway (CHVR) and / or Moorland and City Railways (MCR). Delivery of the visitor centre will be led by the public sector. Its future management and maintenance could be led by the public or third sector.

The masterplan will be delivered in a number of linked phases. Delivery will be dependent upon the site owners and key stakeholders working closely to a plan which meets everyone's needs. Further consideration of phasing will be necessary but the following is a suggestion of how phasing 'could' occur.

Phase 1

- Replacement of Bolton Copper's car park from land east of the A52 onto land adjoining Bolton Copper's operational buildings.
- Development of a first phase of small business units to accommodate existing businesses occupying existing property north of the B5053.
- Potential relocation of the scrap yard from land east of the A52 onto either land identified as the recycling park, or off site.
- The first phase of development will potentially also include redevelopment of land south of the Churnet Valley Railway, by the Churnet Valley Heritage Railway or an associated company to provide new engineering sheds.

Phase 2

- Redevelopment of land east of the A52 with a first phase of housing - approximately 59 dwellings with associated remediation.
- Following on from this would be the development of a new visitor centre and new visitor car parking with associated remediation.

Phase 3

- Redevelopment of land north of the B5053 to provide further phase of housing - approximately 46 dwellings with associated remediation.
- Development of pub / restaurant with associated holiday accommodation above the pub and also in a self-contained annex in the listed Froghall house and its outbuildings.

Phase 4

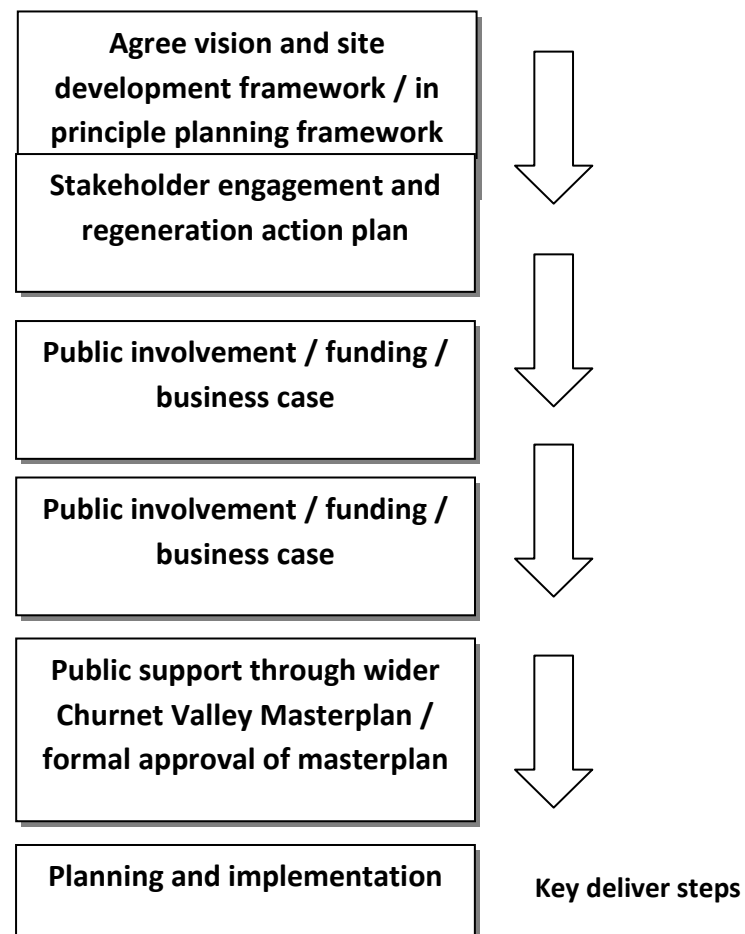
- Redevelopment of the remainder of the employment land adjoining the retained Thomas Bolton works with associated remediation.

A cost plan is now needed to establish the cash flow and funding strategy for the project. There are high cost aspects of the scheme and these will need to be balanced with value generating elements in a timely manner to ensure delivery can progress. Unlocking value early in the process will be important.

This is a complex site and there will be significant risks to delivering regeneration on this scale on such a difficult site. The key risk is two-fold. Firstly the full scale of remediation required, which remains unknown, despite the new work developed through this project. More work is now needed to understand the full implications. Second that the two land owners do not share the vision for the site and do not accept the masterplan. Sterling Investments in particular are central to the future of the site at this stage and they will need support to ‘buy-into’ this vision, specifically some reasonable public sector support and investment in the plan and also by attracting developer partners to deliver the vision.

A clear project lead is now required to drive the project forward from the Council’s perspective. This is quite different from a reactive – if nonetheless effective development control function. Pro-active project development can help to drive regeneration by fostering partnerships, identifying funding opportunities and supporting the vision. Staffordshire Moorlands District Council must fulfil this role.

This masterplan is an evidence based document feeding into the Churnet Valley masterplan. Public consultation on the over-arching Churnet Valley Masterplan will be undertaken by Staffordshire Moorland Council prior to formal adoption.



12. Conclusions and Recommendations

The masterplan for Bolton Copperworks has helped define a strong vision for Froghall. This provides the Council as local planning authority with a clear framework for site development in the future. The key infrastructure projects are set out as is a range and quantum of development.

This vision is quite different from the site owner's previous proposals, subsequently withdrawn and this fact, alongside the sheer scale and potential cost of remediation will make the delivery of the masterplan a substantial challenge.

There should be no doubt that the potential benefits of the masterplan are very significant for Froghall and the wider local economy, but at the same time, the route to realising this will be very difficult indeed.

In the context of the masterplan the following recommendations are made to Staffordshire Moorlands DC and HCA:

1. Confirm the planning policy framework for this site drawing as appropriate on the evidence provided by the masterplan. Establishing a robust planning position is essential as this is very likely to be challenged through a speculative planning application. It is envisaged that following public consultation, the masterplan will be adopted by Staffordshire Moorlands District Council. This will provide clarity over future uses and values.
2. Adopt a pragmatic approach to planning obligations and see the redevelopment of the site in itself as a public good. This may require for example zero affordable housing. It may also limit other contributions, albeit this masterplan should not prejudice future discussions on this matter.
3. Ensure that housing numbers are balanced in line with this masterplan. Residential values will without question need to help meet remediation costs and support scheme viability. However, remediation costs should not be a basis for arriving at appropriate housing numbers.
4. Identify this site and the regeneration and growth of Froghall as a strategic priority within Staffordshire Moorlands. Public funding will be essential to deliver the vision and given that public funding will be limited this site needs to present a clear investment case for the public sector with clear objectives and priorities. There needs to be high level political buy-in.
5. Consider the scope for public / private partnership (cooperation) accepting that the public sector has little or no land and that planning powers in themselves without direct investment and intervention will not see the vision delivered. This will involve scoping potential delivery options.
6. Further work is now required to investigate the business case and development scenario for the visitor centre and associated craft / retail and café uses.
7. Negotiation with the principal owners and tenants on site will be required to explain the masterplan vision and how they can contribute / become involved. Sterling Investments are key to this but also, Thomas Bolton, Auto-Line Motors and Precision Engineering. A working group could be established to bring together these interests. This would also include Staffordshire Moorlands District Council, the Environment Agency, the Local Highways Authority and special interest groups (CVHR and MCR)
8. The delivery of the masterplan needs to be driven by Staffordshire Moorlands DC and a dedicated officer needs to be established to lead this work. Implementation of the vision will not be secured by planning powers alone and substantial time, resources and investment will be required by the public sector to drive forward regeneration in partnership with the private sector. This will also involve identifying potential public funding sources options.
9. Immediate investigations are required to consider ground water conditions on site and to consider whether remediation works by the existing landowner can be enforced to begin to address remediation and particularly ground water conditions. This should make clear any immediate requirements of the owners and the work will need to be jointly led by SMDC and EA.
10. The above (9) could form part of a more detailed site investigation study to determine the precise location, nature and extent of contamination. This information is necessary to prepare detailed development proposals and determine the necessary remediation strategy. This process will provide greater certainty on development costs and development viability. The site owners should be responsible for commissioning this work, but results should be shared with the SMDC to inform detailed design and viability consideration. This should provide greater clarity over remediation costs.
11. Consider the masterplan as a pilot within SMDC as a localism project with the masterplan taking the form of a neighbourhood plan shared between the two electoral wards spanning Froghall.
12. Work with the heritage railway and canal interests to ensure the potential value added to the development by these uses and activities is not lost.
13. Promote Froghall and the masterplan as part of the wider Churnett Valley.
14. Establish a clear framework through which design quality can be delivered. This would be linked with future planning application process and provide clarity over the quality of implementation.

Appendix 1 – Baseline Information

- **Baseline report**
- **Additional Information on Ground Conditions**

Appendix 2 – Options Report & Financial Appraisals