Stanton Regeneration Site
Supplementary Planning Document (SPD)

Erewash Borough Council

Adopted January 2017

Contents:

1.0 Background

1.1 This Supplementary Planning Document (referred to from this point onwards as the 'SPD') provides a Masterplan to enable the comprehensive redevelopment of the Stanton Regeneration Site. The SPD will reduce uncertainty for developers, and so help to bring this complex site forward.

1.2 As an SPD, the document represents a material consideration alongside the policies of the Borough's Local Plan, carrying significant weight when the Borough Council determines future planning applications affecting the site.

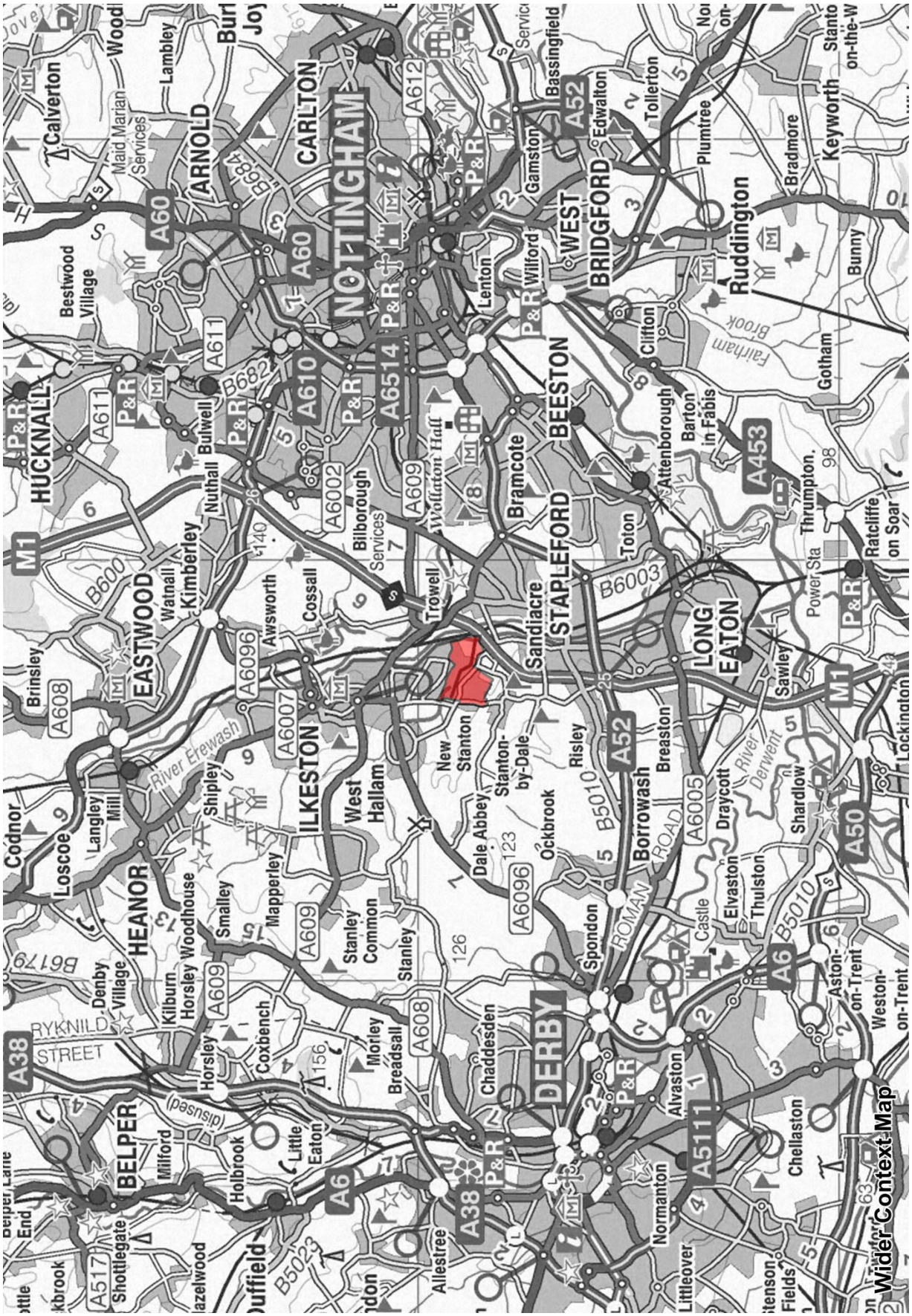
1.3 Despite the additional detail in the SPD, no new planning policy (in the form of development plan policies) is introduced. The SPD's content therefore remains in full conformity with the adopted Erewash Core Strategy (2014) and relevant remaining Local Plan Saved Policies. The SPD supports and expands upon these policies, which have already been subject to extensive statutory consultation and public examination ahead of their adoption.

1.4 Wide-ranging engagement has been undertaken with a range of stakeholders which, along with technical information already available to the Borough Council, has shaped the SPD's proposals. Details of the engagement undertaken by the Borough Council are able to be viewed in the SPD's accompanying Consultation Statement.

1.5 This SPD has been subject to Sustainability Appraisal (SA), which is published in the accompanying **Sustainability Appraisal Final Version Document**. The SA concludes that SPD proposals as a whole would deliver the greatest sustainability gains to local economic, environmental and social conditions.

1.6 A map showing the Stanton Regeneration Site set within its wider surrounds follows this section.

Wider Context Map



2.0 Site History

2.1 The Stanton Regeneration Site has a long industrial heritage spanning the last 250 years. However, such sustained industrial activity has unsurprisingly left a notable legacy on the quality of ground conditions across the area earmarked by the SPD for regeneration.

2.2 The introduction of blast furnaces alongside the Nutbrook Canal during the mid-19th century heralded the beginning of heavy iron-based industrial practices at the site. Increased global demand for iron in the 1860's, mainly arising from its more widespread use in construction and military hardware, prompted a commercial expansion of the Stanton site which saw the introduction of new furnaces and foundries constructed in the east of the site in close proximity to the Erewash Canal.

2.3 Construction by the Stanton Ironworks Company Ltd of modernised facilities at the Stanton Foundry, Hallam Plant and the Flange Plant works during the early-20th century signalled a move towards cleaner production and refinement of iron. This reduced, but did not eliminate, pollutants emitted from the production process which, prior to the introduction of more efficient facilities, were notably unclean and unsympathetic to the local environment.

2.4 Production of iron began to decline in the aftermath of the Ironworks nationalisation in 1967. Despite Stanton's re-privatisation, firstly into the ownership of the Pont-a-Mousson group and more latterly by Saint Gobain PAM UK (the current site owners), iron production at the site finally halted in 2007.

2.5 Large-scale manufacturing in the area is now confined to the Stanton Bonna concrete works located to the west of Littlewell Lane, adjacent the SPD area. Within the SPD area many of the old ironworks buildings have been demolished, with others now occupied by alternative employment uses. Several areas of land are now used for the storage of goods and vehicles.

2.6 A map showing the site layout in 1955 concludes this section, providing useful historic context on the then scale of industry occurring at Stanton.

Site History Map

Site History Map (c.1955)

3.0 Planning Policy Context

3.1 The Erewash Core Strategy adopted in March 2014 sets out the development plan policy for the Stanton Regeneration Site in Policy 20. This includes the following requirements to produce a sustainable new neighbourhood in this location:

- Comprehensive remediation and redevelopment
- Around 2,000 homes
- A business park of around 10ha
- At least 10ha of land for general industry
- Additional replacement employment land
- Utilisation or safeguarding of the rail spur
- A centre of neighbourhood importance
- Wildlife corridor between the Nut Brook and Erewash Valleys
- At least 20ha destination wild space and informal recreation area
- Enhanced multi-user link between the Nutbrook and Erewash Valley Trails
- Other areas of open space
- Restoring the landscape character of the dale
- Improved pedestrian and cycle access to adjoining areas
- Improved public transport, especially to Ilkeston and Nottingham

3.2 Additional policy requirements include:

Core Strategy Policy 6

- Promoting the hierarchy of town and local centres

Core Strategy Policy 8

- Up to 30% of housing to be affordable, subject to viability

Core Strategy Policy 10

- Making a positive contribution to the public realm and sense of place
- Creating an attractive, safe, inclusive and healthy environment

Core Strategy Policy 11

- Sustaining and enhancing the significance of heritage assets and their settings

Core Strategy Policy 16

- Protecting existing and potential Green Infrastructure corridors

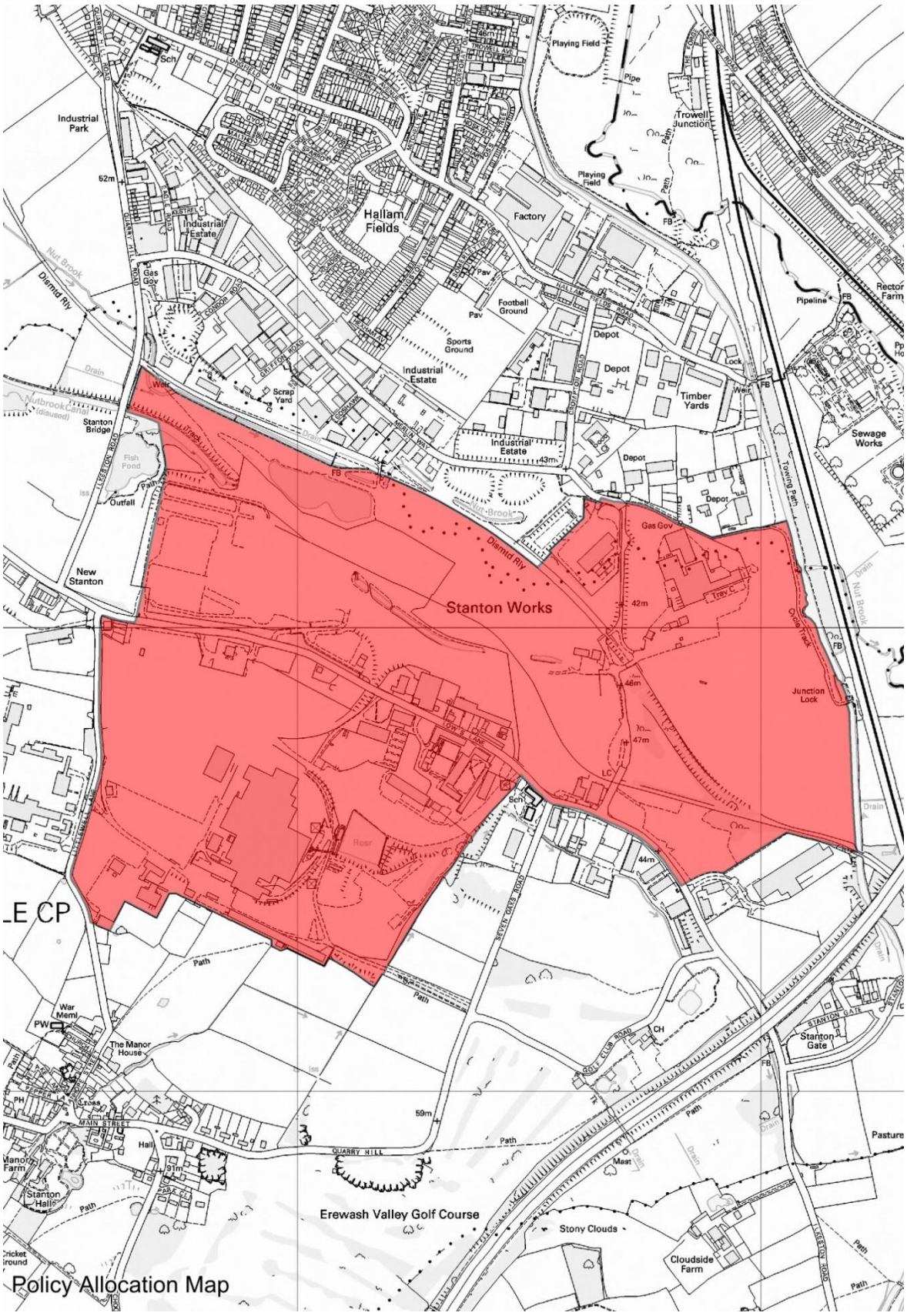
Core Strategy Policy 17

- Protecting Biodiversity Action Plan (BAP) species
- Protecting, restoring, expanding and enhancing existing BAP habitats
- Protecting designated sites of importance for nature conservation
- Where harm to biodiversity is unavoidable, providing equivalent compensation

3.3 An outline planning application was submitted by the site owners for the redevelopment of the site in January 2013. That application was withdrawn in July 2015, not least because of conflicts with Core Strategy policies. This SPD has been drafted in the light of that experience.

3.4 A map showing the extent of the Stanton site allocation (totalling **133 hectares** in size) is presented at the end of this section. The map also shows the site's surrounding land uses, helping to demonstrate its immediate setting.

Policy Allocation Map



4.0 Plan 1: Land-use Masterplan

4.1 Plan 1 depicts a distribution of land uses across the site that accords with the policies of the Core Strategy. Proposals that follow this pattern of land uses will therefore be supported.

Residential Area

4.2 An area of 60ha is indicated for housing development towards the centre and south-west of the site. Provision for a primary school, sustainable drainage, open space and an internal road system will also have to be provided in this area, all of which will need to take account of the need to restore the landscape character of the dale. Design considerations will also have to take into account noise from surrounding roads and industrial uses. **Appendix 1** provides guidance on how to address these issues.

Neighbourhood Centre

4.3 An area of 1ha is indicated towards the centre of the site for a Neighbourhood Centre. This location is centrally accessible from the proposed area of housing, whilst also benefitting from frontages on either side of the Lows Lane through route.

4.4 In order to conform to its role as a Neighbourhood Centre it is important that the scale of retail provision is limited to the top-up shopping needs of the new neighbourhood only. Larger supermarkets, retail warehousing and drive-through restaurants will not be suitable for this role.

4.5 The Neighbourhood Centre will also need to provide for a variety of needs including local health, community and public transport functions, whilst also integrating safely with the busy through road. **Appendix 2** provides guidance on how to address these issues.

Business Park

4.6 A 9ha Business Park is indicated towards the centre of the site in a high profile location straddling Lows Lane. Existing character buildings within the site, such as the St Gobain PAM UK Ltd HQ, and proposed heritage and biodiversity enhancements in the Local Wildlife Park to the rear of the site, all enhance the suitability of this location for this use. A Business Park of predominantly B1 uses will also provide a sensible buffer between the proposed Housing Area and Industrial Park.

Industrial Park

4.7 An area of 18 hectares of industrial land is indicated at the eastern end of the site. This is considered suitable to provide for both general industrial needs and the relocation requirements generated by redevelopment of areas of existing employment elsewhere on the site. The proposed uses are compatible with the location adjacent the noise influence of the M1 and Erewash Valley rail corridor, and are suitably separated from the area of proposed housing to prevent harm to business operations and residential amenity alike.

4.8 The 500m of the existing rail spur up to the former Flange Plant access road is indicated as retained. This provides an opportunity for industries requiring a rail connection to locate on land to either side, e.g. those associated with or displaced by proposals for HS2. Continuing the spur further west would require a formal level crossing of the former Flange Plant access road, and would not yield a usable spur section of any greater length, hence its proposed termination here.

Local Wildlife Park

4.9 An area of 22ha along the northern edge of the site is indicated for use as a Local Wildlife Park. This area is intended to provide for the wildlife corridor, trail link, accessible wild space, informal recreation and habitat protection and enhancement needs of the development. It is also intended to provide compensatory habitat for biodiversity interest lost to development elsewhere on the site. **Appendix 3** provides further guidance on how this space can fulfil all of these functions.

Strategic Landscaping

4.10 A belt of strategic landscaping is indicated along Littlewell Lane. This is needed to enhance the existing landscaping along this boundary in order to screen the visual impact of the Stanton Bonna concrete works on the proposed new housing development. Further guidance on this strategic landscape belt is contained in **Appendix 1**.

4.11 An additional area of strategic landscaping is also proposed to the north and west of the Industrial Park. This area is needed to deliver the wildlife corridor and trail link requirements of the site, in conjunction with the Local Wildlife Park. It can also provide for the sustainable drainage needs of the area north of Lows Lane. Further guidance on how this area could fulfil these functions is provided in **Appendix 3**.

Multi-User Trail Network

4.12 Three strategic trails are indicated to provide walking and cycling links to the wider area. Firstly, a north-south route linking the site to the Nut Brook trail in the north and Stanton-by-Dale village to the south. Secondly, an east-west route extending the existing Nut Brook Trail through the site to the Erewash Valley Trail. And thirdly an extension of the Nutbrook Canal towpath to link the two other routes. Further guidance on the form these routes will need to take to fulfil these functions is provided in **Appendix 3**.

Policy SRS 1 – Land Uses:

The land uses at the Stanton Regeneration Site shall be as set out in Plan 1, which includes:

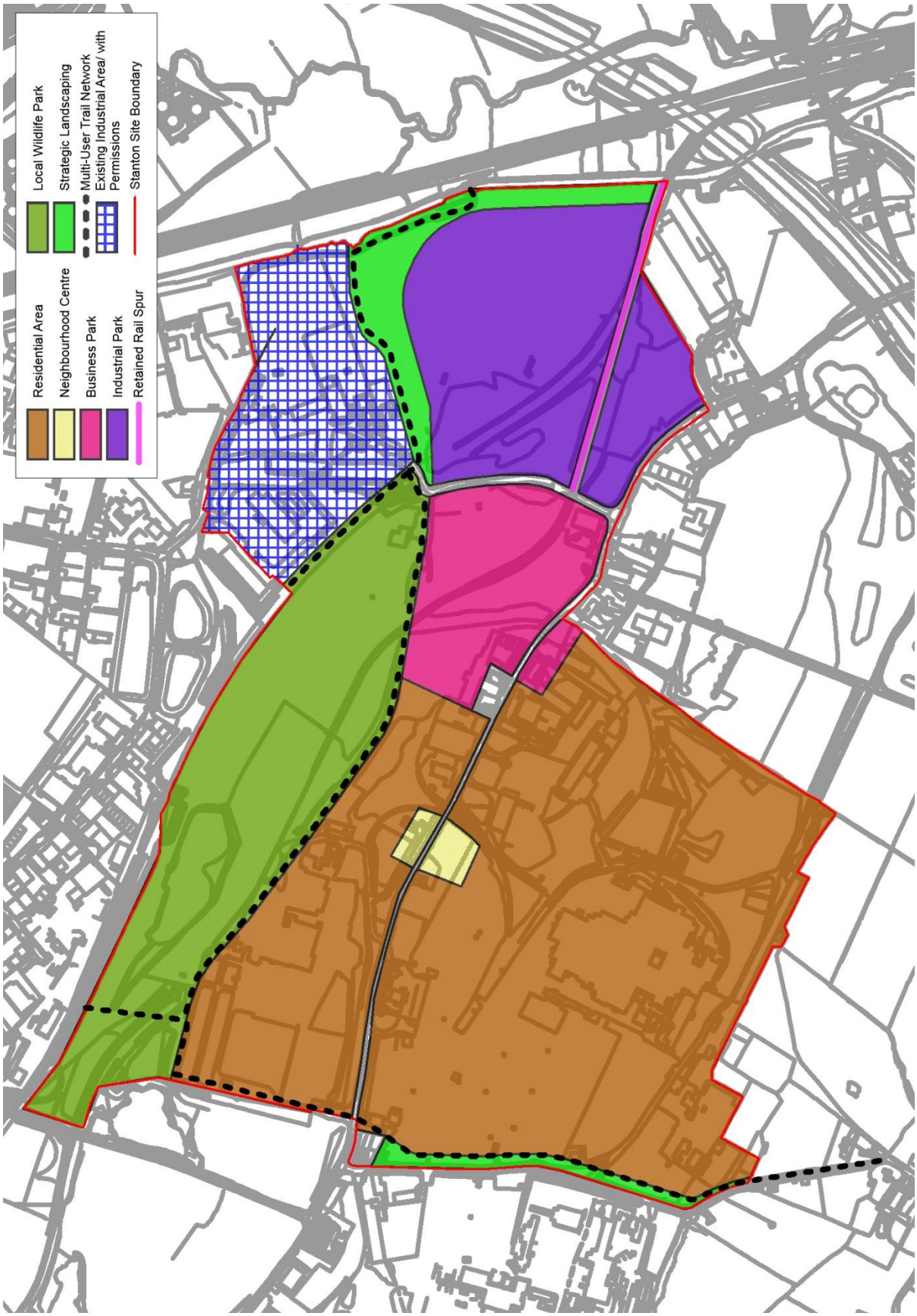
- **60 ha Residential Area, including a primary school and open space**
- **1 ha Neighbourhood Centre**
- **9 ha B1 Business Park**
- **18 ha B2 Industrial Park, including a 500m rail spur**
- **22 ha Local Wildlife Park**
- **Strategic Landscaping**
- **Multi-User Trail Network**

Policy SRS 2 – Neighbourhood Centre:

The neighbourhood centre shall include no more than 1,500sqm gross of retail floorspace, including:

- **A supermarket of up to 500sqm gross**
- **All other retail provision in units of less than 150sqm gross**

Plan 1 – The Land Use Masterplan



5.0 Plan 2 – Development Phasing Program

5.1 Plan 2 illustrates the proposed phasing program for the site. This program takes account of the need to protect remediated areas from re-contamination by the remediation of later phases, the need to provide a mix of development uses throughout the program of delivery, and the need to provide a viable development program.

Remediation Considerations

5.2 Remediated areas could be subject to re-contamination from the movement of contaminated ground water, the flow of surface drainage, and wind-blown dusts. Ground water flow is from the south west to the north east, favouring commencement of remediation in the south western corner of the site. This is also the direction of prevailing winds and therefore of dust blow. Surface water drainage follows site contours. South of Lows Lane these lead to the natural low point of the culverted Littlewell Brook, which runs parallel and close to Lows Lane. North of Lows Lane the natural drainage is to the Nutbrook Canal and beyond that the Nut Brook itself. Further guidance on remediation requirements is included in **Appendix 4**.

5.3 Remediation considerations favour the development of Zone H1 first, followed by H2, followed by H3. They also favour the remediation of Zone BP, followed by Zone IP1, followed by Zone IP2.

Mixed Development Considerations

5.4 The most sustainable approach to a new neighbourhood is to provide employment first, and then provide housing in tandem with the shops and services needed to support them. This approach has been proven over 100 years of new towns practice to maximise the internalisation of journeys, increase the market demand for new housing, and avoid later opposition to employment uses.

5.5 Mixed development considerations favour the delivery of a variety of employment opportunities, e.g. Zones BP and IP1, prior to the delivery of the housing in Zones H2 and H3.

Viability Considerations

5.6 Despite the objectives of providing mixed development, there is a strong viability argument to provide an early element of housing. The higher land value of housing should be able to kick-start development, releasing the profit necessary to undertake the remediation of less lucrative employment sites. A small initial housing development would also de-risk development of the wider site by establishing actual remediation costs and development end values.

5.7 Viability considerations favour the delivery of Zone H1 as the first phase of the development. They also favour the delivery of Zone IP2 after the commencement of Zone H2, due to the high remediation costs of Zone IP2.

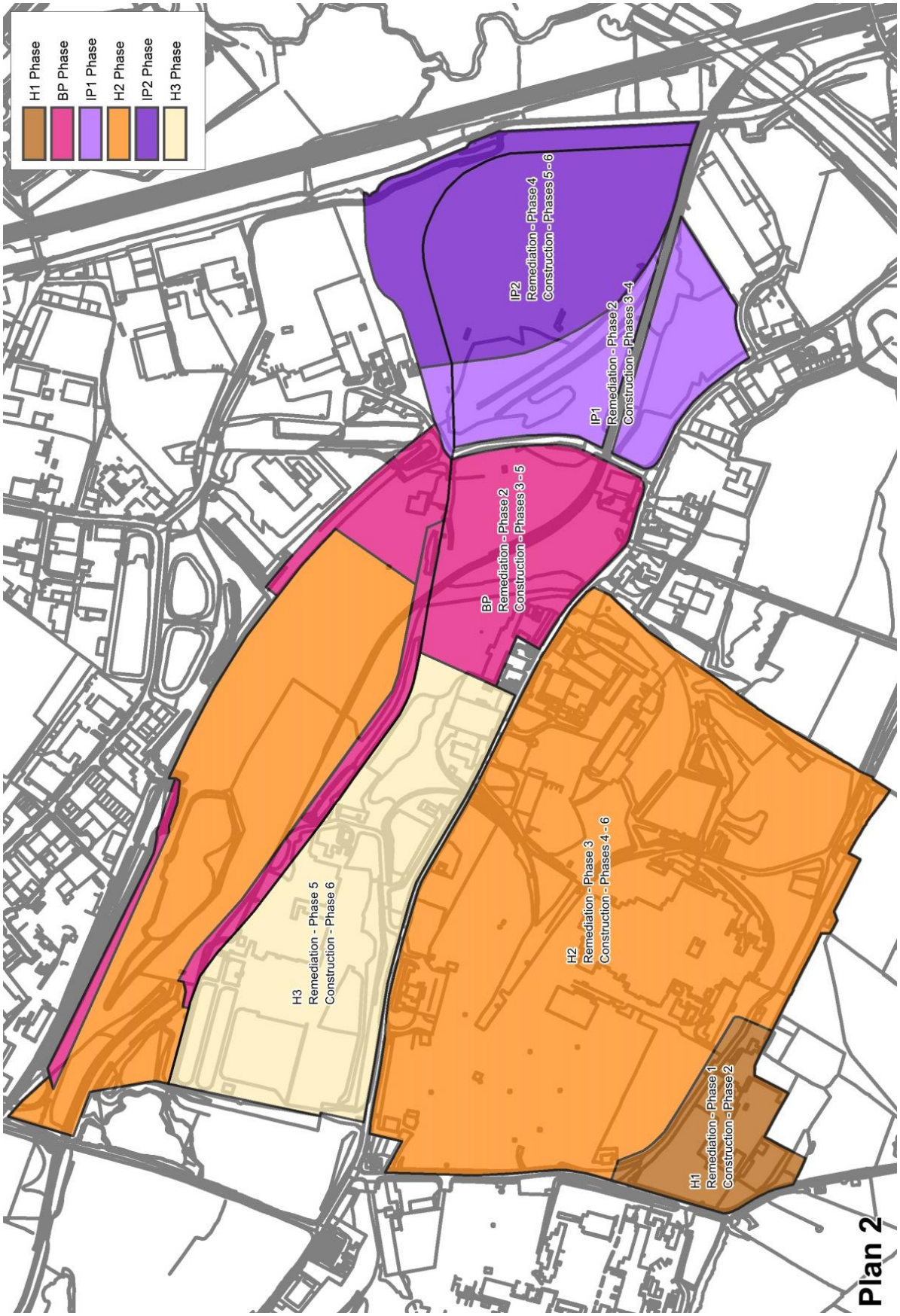
Policy SRS 3 – Remediation

Remediation shall be conducted in accordance with Plan 2 as follows:

- **Remediation of Zone H2 shall not commence until Phase 1 remediation of Zone H1, Zone BP and Zone IP1 (and associated Local Wildlife Park areas) has been completed.**
- **Remediation of Zone IP2 shall not commence until Phase 1 remediation of Zone IP1 has been completed.**
- **Remediation of Zone H3 shall not commence until Phase 1 remediation of Zone H2 and Zone IP2 has been completed.**

Phase 1 remediation includes all demolitions, lifting all known hardstandings and foundations, all necessary further investigations, treatment of contamination hot-spots, mass movement of spoil materials and infill of voids.

Plan 2 – Development Phasing Program



6.0 S106 Contributions for Infrastructure

6.1 In addition to utilities and drainage infrastructure, s106 contributions will be required towards the following:

Remediation

6.2 S106 agreements will be used to legally require some of the profits realised on the sale of land for early phases of housing development to be recycled to finance the remediation of the proposed employment development and Local Wildlife Park.

Wards Recycling Noise

6.3 Zone H3 cannot progress without a resolution of the noise from Wards Recycling Plant. Previous proposals to achieve this via a man-made hill have been rejected as harming the landscape, recreational, biodiversity and flood management function of the Local Wildlife Park. Consequently, it is likely that the solution will have to involve paying for works on the Wards Recycling site itself.

Affordable Housing

6.4 In accordance with the Government's emerging Starter Homes Policy**,** 20% of housing will be expected to be delivered as Starter Homes. An additional 10% will be expected to be delivered as homes for social rent, including homes for young families and older people.

6.5 An exception is made for Zone H1, where a large financial contribution is required to ensure the remediation of employment land. In order to provide that contribution up-front, Zone H1 is only expected to contribute affordable housing in the form of 10% Starter Homes.

Community Facilities

6.6 The main community provision is the proposed primary school, which will require joint contributions from housing development on Zones H2 and H3. Zone H2 will additionally contribute the provision of a community hall as part of the neighbourhood centre.

Open Space

6.7 A variety of open spaces will be required, including informal recreation areas in the Local Wildlife Park and additional provision in the areas of housing.

Sustainable Transport Contributions

6.8 The most effective way to reduce the traffic impacts of the Stanton Regeneration Site is to ensure the timely provision of on-site facilities such as the primary school, employment and recreational facilities. That is why the provision of the school and remediation of the employment land are early priorities for financial contributions.

6.9 In addition, it is necessary for the site to be accessible by a range of means of transport. This requires the various multi-user routes linking to Stanton-by-Dale and via the Nut Brook and Erewash Valley Trails on to Ilkeston and Sandiacre respectively. A bus service to Ilkeston and Nottingham is also necessary, as is active travel planning to encourage use of these modes. However, though the provision of this sustainable transport infrastructure is necessary to provide choice, it will not in itself prevent transport problems arising.

Highway Works – Junction Improvements

6.10 A number of off-site junction improvements will be required to maintain the flow of traffic in the general area, including at the following junctions:

6.11 **New Stanton (A)**: Littlewell Lane / Lows Lane / Ilkeston Road
A new roundabout is proposed with two lane entry on each arm at the termination of Littlewell Lane, connecting directly to a diverted Ilkeston Road. That diversion avoids the need for a second roundabout at the Sowbrook Lane / Ilkeston Road / Lows Lane junction, which would be restricted by land ownership and harm the setting of the Grade II listed Twelve Houses.

6.12 **Stanton Gate (B):** Ilkeston Road / Stanton Gate
A new roundabout is proposed with two lane entry on each arm.

6.13 **Trowell (C):** Stapleford Road / Nottingham Road / Ilkeston Road
Widening the road within the adopted highway corridor to lengthen separate right turn lane approaches on each leg of the junction.

6.14 **Stapleford (D):** Ilkeston Road / Coventry Lane / Hickings Lane
Full signalisation of the double mini-roundabout.

6.15 A map indicating the location of the above works is included at the end of this section.

Highway Works – Neighbourhood Traffic Mitigation

6.16 Various relief roads have been tested in the formulation of the SPD, but at this point none have been taken forward due to their lack of effectiveness in relieving local traffic conditions. In particular, many interventions only relieve one area by increasing problems elsewhere. Consequently, it is proposed that a substantial fund should accrue during the development to address the impact that increased traffic levels will have on the surrounding neighbourhoods including;

- Dale Abbey
- Stanton-by-Dale
- Risley
- Sandiacre
- Hallam Fields
- Kirk Hallam

6.17 Guidance setting out a framework of interventions which help work towards supporting a reduction in the impact of traffic on those neighbourhoods listed above can be found at **Appendix 5** of this SPD.

Policy SRS 4 – Affordable Housing

Housing development of Zone H1 shall include:

- **10% of units as 2-bed Affordable Starter Homes**

Housing Development of Zones H2 and H3 shall include:

- **20% of units as 2-bed Affordable Starter Homes**
- **5% of units as 2-bedroomed, 4 person houses for social rent to 'lifetime homes' standard.**
- **4% of units as 2-bedroomed, 3 person bungalows to wheelchair standard for Social Rent**
- **1% of units as 4-bedroomed, 6+ person houses for Social Rent**

Policy SRS 5 – Financial Contributions

Development of Zone H1 shall make provision for financial contributions of:

- **Around £700,000 for the remediation of Zones BP and IP1 before commencement of development, and**
- **Around £50,000 for the provision of a pavement along Littlewell Lane to Stanton-by-Dale during the development.**

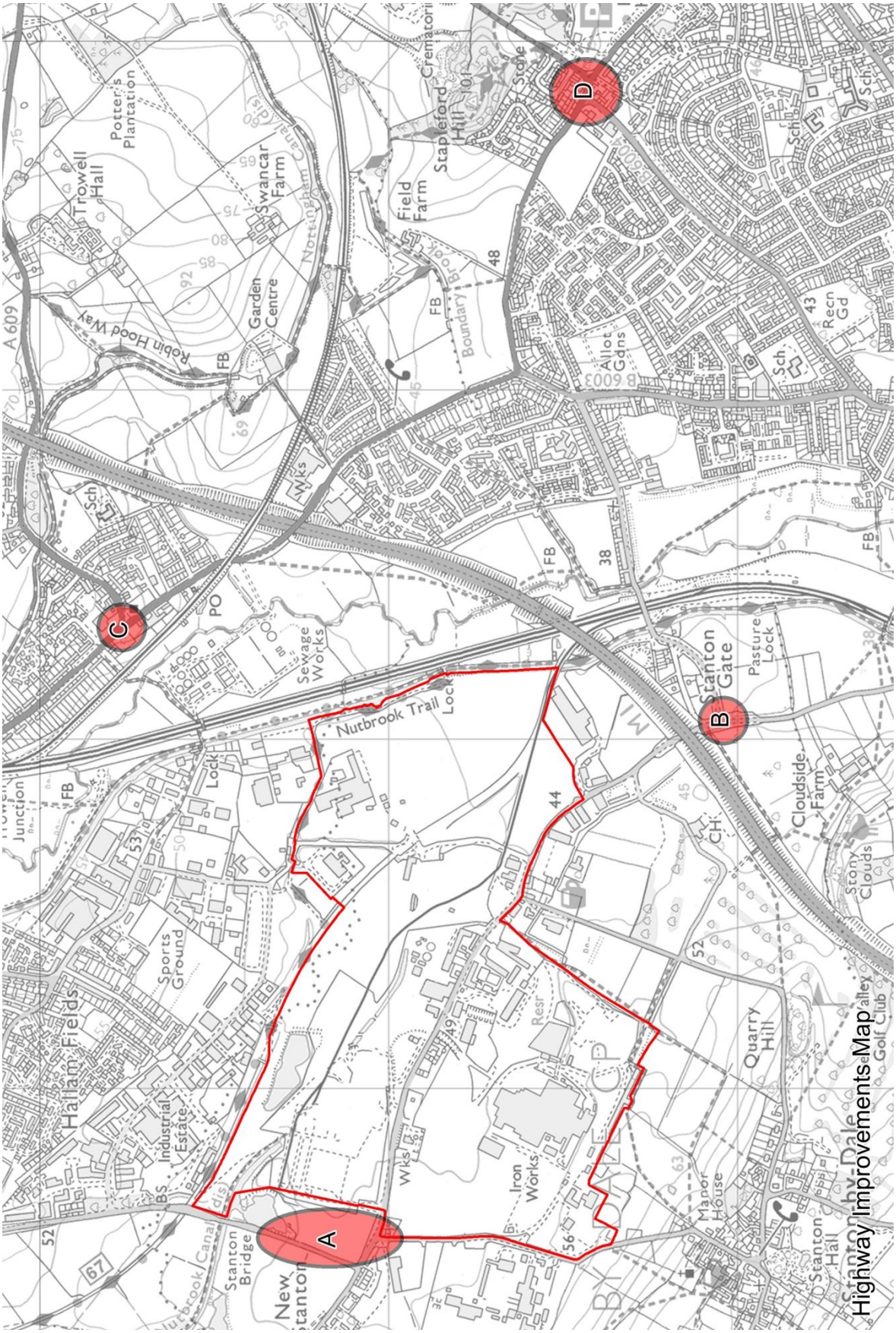
Development of Zone H2 shall make provision for financial contributions of:

- **Around £1,700,000 for the remediation of Zone IP2 before commencement of development,**
- **Around £5,500,000 for the provision of a new primary school during the development,**
- **Around £200,000 for the provision of a community hall during the development,**
- **Around £500,000 for open space uses during the development,**
- **Around £1,000,000 for the laying out of multi-user routes and footpaths during the development,**
- **Around £500,000 for travel planning during the development,**
- **Around £2,250,000 for bus subsidies during the development, and**
- **Around £8,000,000 for off-site highway works during the development.**

Development of Zone H3 shall make provision for financial contributions of:

- **Around £375,000 for the provision of noise attenuation at Wards Recycling before commencement of development, and**
- **Around £1,000,000 towards additional classrooms at the new school.**

Highway Improvements Map



Appendix 1 – Guidelines for Housing Zones

Main Avenues

A1.1 As set out in Plan 1, a substantial landscaping belt is required alongside Littlewell Road to visually screen the impact of the Stanton Bonna concrete works on the new residential development in Zones H1 & H2. Discontinuous Belts of existing Cupressus species evergreens need to be gap-filled and softened by deciduous planting. The Derbyshire Coalfield Village Farmland Local Landscape Character would support the use of disease resistant Oak and Ash with a Holly understorey to achieve this.

A1.2 The Littlewell Road landscape belt will also prove useful in addressing high levels of noise from traffic on Littlewell Road and industrial processes to the west of it. The trees themselves will provide little mitigation, but the separation distance between the road and the new housing created by accommodating the tree belt will be beneficial.

A1.3 Even higher levels of noise are experienced from passing traffic along Lows Lane. A stand-off of around 15m between the road and new housing is likely to be necessary here also. A substantial verge, parallel residential access road and forecourt parking areas would provide this level of separation, whilst also using the bulk of the houses themselves to shield sensitive rear gardens and bedrooms. The verge area could then host further belts of native tree planting, incorporating existing planting where possible.

A1.4 The creation of wooded settings along both Littlewell Lane and Lows Lane would create a natural landscape character appropriate to the new neighbourhood.

Grid-Iron Layout

A1.5 The rectilinear housing zones lend themselves to a grid-iron based layout. Such a layout would help dampen noise across the site, which is likely to be necessary. By running the long axis of street layouts along the shallow contours of the site (e.g. parallel to Lows Lane), the landscape character of the dale would be partially restored.

Village Greens

A1.6 A village green in Zone H2, along the line of the culverted Littlewell Brook that lies south of and parallel to Lows Lane, offers opportunities to meet a number of development needs.

A1.7 Firstly, as this is the natural low point of this site, a green here could provide the primary natural drainage scheme for Zones H1 and H2. A shallow depression of around 2ha would be adequate for this purpose. Enclosure by a single aspect residential access road would create a flood boundary for the feature. Further investigation of ground contamination issues would be needed to determine if that area should be excavated of made ground to reveal the brook, or be used as an infiltration feature. Either way, a restricted outflow to the Littlewell Brook east of the site would be required to avoid downstream flood risk.

A1.8 By picking out the natural valley floor, the village green would play a major role in restoring the landscape character of the dale. It would also lend the new neighbourhood a strong character of its own.

A1.9 At the scale proposed and with the surrounding road acting as a flood retaining wall, the village green itself could be contoured as gently as 1:30. That would enable the area to be used as a local park providing formal landscaping and amenity greenspace in a secure, overlooked environment. The existing bowling green at the eastern end of the green could be complimented by a multi-use games area, whilst to the west facilities for younger children such as a destination equipped play area and primary school playing fields could be provided.

A1.10 Though the village green concept would provide for most open space uses for the new development, it would be too distant from some parts of the residential development to provide for effective children's play. The provision of remaining needs as a discrete area of amenity grassland and tree planting is preferred to the pepper-potting of small equipped play areas. A secondary village green overlooked by surrounding houses would encourage use, safety, avoid amenity dis-benefits and provide more local character to the neighbourhood. Such a facility would lend itself to the inclusion of place-making artwork.

Appendix 2 – Guidelines for Neighbourhood Centre

A2.1 Plan 1 proposes that the Neighbourhood Centre should straddle both sides of Lows Lane. This gives the opportunity for the centre to be delivered in two phases, the southern phase in conjunction with Zone H2, and the northern with Zone H3. This should help to keep the level of retail and other provision in step with the level of local demand.

A2.2 The Neighbourhood Centre should be supported by shared parking provision for its various uses. This could be within the 15m acoustic stand-off characteristic of the adjacent residential development, so complimenting the emerging character of the neighbourhood whilst also providing parking along the Lows Lane road-front.

A2.3 The Neighbourhood Centre is the right location for the primary bus halts for the new neighbourhood. Halts with laybys and shelters would be appropriate on both sides of Lows Lane.

A2.4 The proposed location of the Neighbourhood Centre is immediately adjacent to the former railway underpass under Lows Lane. This underpass could provide an important safe pedestrian /cycle link between Zone H2 and the Local Wildlife Park, avoiding the need to cross the busy Lows Lane. However, a signalised pedestrian crossing of Lows Lane would also be required to ensure safe access along the desire line between the two sides of the road.

A2.5 Policy SRS 2 gives a clear evidence-based explanation of the scale of retail appropriate for the Neighbourhood Centre. Health facilities such as a GP, dentist or health centre will also be required, at a total estimated floorspace of 800sqm. The financial contribution set out in Policy SRS 5 would allow for a 200sqm community hall.

A2.6 A two-form entry primary school is required to serve the development, which would require a 2ha plot adjacent the Neighbourhood Centre. A primary school is often the main community focus of a new neighbourhood, hence the desirability for the school, destination equipped play area, village green, and neighbourhood centre to be closely related.

Appendix 3 – Guidelines for Green Infrastructure

A3.1 The green infrastructure to be delivered within residential areas has been discussed under Appendix 1 above. However, that provision alone is insufficient to meet either the needs of the new neighbourhood or the requirement for comprehensive redevelopment.

Local Wildlife Park

A3.2 Plan 1 depicts the area required for the Local Wildlife Park. This encompasses the whole of the designated Ilkeston Road Ponds and Nutbrook Canal Local Wildlife Site, and half of the designated Stanton Ironworks Habitat Mosaic Local Wildlife Site.

A3.3 It is proposed to enhance the designated Ilkeston Road Ponds and Nutbrook Canal Local Wildlife Site by widening the channel of the Nut Brook itself where it runs through the site, and restoring lost sections of the Nutbrook Canal. Widening the Nut Brook will allow it to meander, riffle and pool, increasing the quality and range of wetland habitats provided. Restoring the canal will add to aquatic and bankside habitat whilst also conserving and enhancing the heritage asset of the canal and contributing to restoration of the landscape character of the dale.

A3.4 Full remediation of the Local Wildlife Park is not compatible with the maintenance of its wildlife interest. However, un-remediated areas will not be safe for public access. Consequently a balance has to be struck between preservation of the wildlife interest and the level of public access allowed. This could be achieved through a managed network of paths and remediated areas of low wildlife interest, separated from un-remediated areas of wildlife interest by waterbodies, areas of marsh, bunds, hedgerows and post and rail fencing.

A3.5 A particular issue is created by the central pond, which is a focus of access desire lines. It is proposed to manage these by creating formal access from the main central restored area, to a destination boardwalk by the lake edge, and on to a destination art feature on the truncated railway bridge overlooking the Nut Brook Trail.

A3.6 Another issue is created at the eastern end of the site, where the converging new extension of the Nut Brook Trail and the canal towpath will create short-cut desire lines. It is proposed to deal with this by remediating that whole area of low wildlife interest to make it safe for public access. As this area is adjacent to the preserved area of habitat mosaic, it is proposed that the remediated area is also managed for that habitat. This will provide compensation for the designated area of habitat mosaic that will be lost to the development of the Business Park.

Flood Management

A3.7 The widening of the Nut Brook channel to increase its flood capacity can reduce the risk of flooding downstream in the Erewash Valley. The restored canal will also play a flood management role, intercepting drainage from Zone H3 and the Business Park. That water would then be conveyed by culverts from the terminus of the Nutbrook Canal to the Erewash Canal. To prevent consequent flooding of the Erewash Canal, a sustainable drainage feature could be created in the area of Strategic Landscaping north of the Industrial Park. Such a feature could take the form of a swale along the line of the former canal, providing further reference to that heritage asset and its contribution to the landscape character of the dale.

Trail Network

A3.8 The Nut Brook Trail is a 3m wide multi-user trail for use by pedestrians, cyclists and horse riders. Its extension along the former railway line to the eastern end of the Local Wildlife Park and on through the Strategic Landscaping north of the Industrial Park to meet the existing bridge over the Erewash Canal should be of the same order. A suitable crossing of the Foundry Park access road will be required, e.g. a zebra crossing.

A3.9 There is insufficient room in the highway for the pavement along Littlewell Lane to Stanton-by-Dale to meet full multi-user standards. Where that trail passes through the areas of proposed residential development then dual walking and cycling use can be provided by incorporating it into the street layout, e.g. as a pavement alongside a residential road.

A3.10 Where the north-south route crosses Lows Lane a signalised dual pedestrian / cycle crossing will be required. A footpath only link across the open field would provide choice in addition to the dual-user route through Zone H3. The final stretch should be to full multi-user standard, including the bridge over the Nutbrook Canal, boardwalk over the marsh, and bridge over the Nut Brook. Though these features are expensive, they are essential to provide a safe link to Ilkeston avoiding the narrow Ilkeston Road bridge.

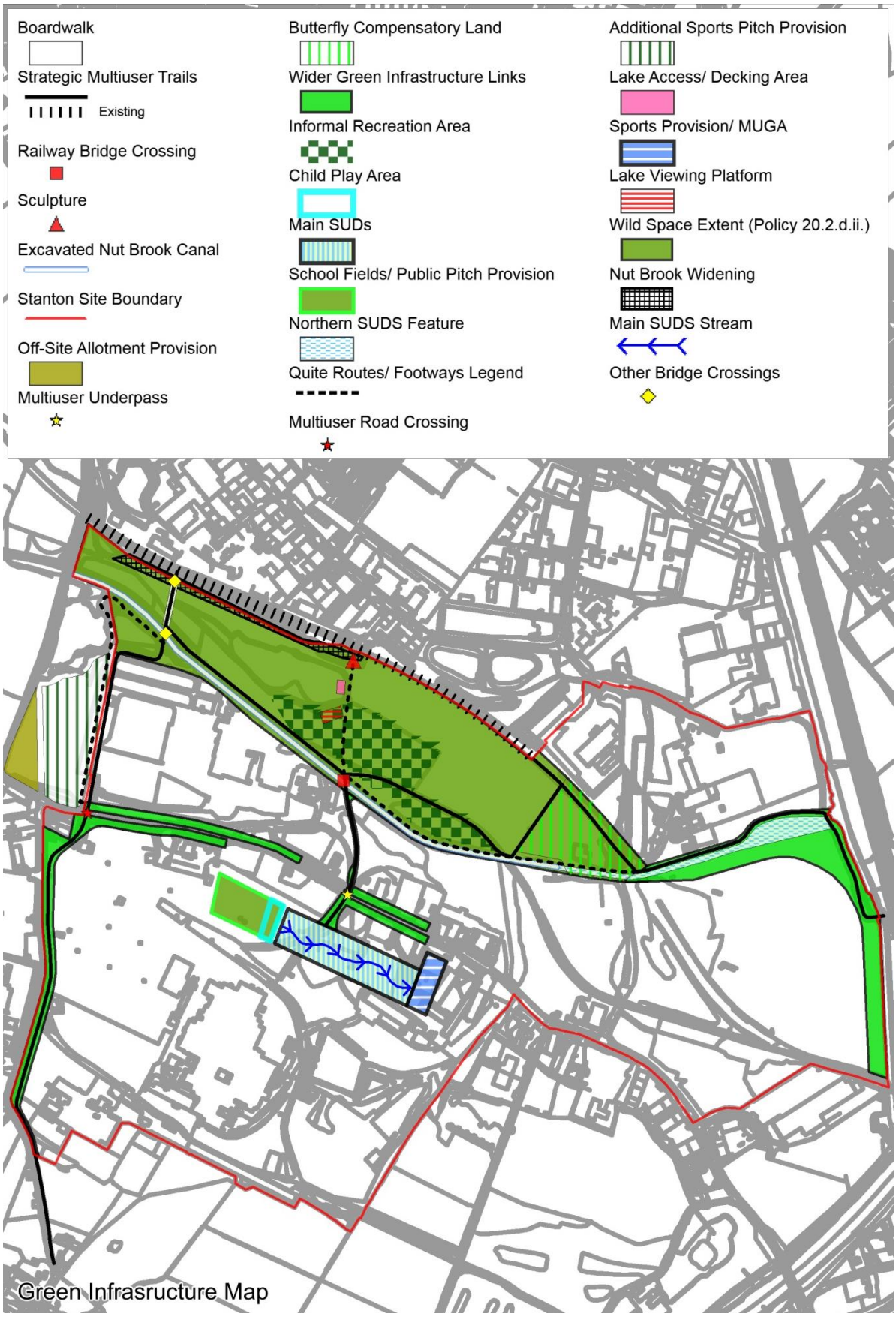
A3.11 By providing the towpath to the restored section of the Nutbrook Canal to multi-user standard, a circular route around the Local Wildlife Park will be created, greatly enhancing its recreational function. The end of the rail spur also lends itself to this role, providing an opportunity for a quieter footpath section along the parallel part of the canal.

A3.12 An internal north-south trail linking the secondary village green with its destination art-work to the second destination art-work on the truncated bridge above the Nut Brook Trail is also suggested. Such a link, utilising the former railway underpass under Lows Lane to also connect the village green to the heart of the Local Wildlife Park, would provide a character feature linking these elements of the new neighbourhood.

Ilkeston Road Field

A3.13 Though not part of the designated Stanton Regeneration Site, the field to the east of Ilkeston Road is in the same ownership and was included in the previous Stanton planning application. A deflection of the Ilkeston Road through this field to a new roundabout at the end of Littlewell Lane has already been proposed, as has the provision of a footpath alongside the eastern hedge boundary. The rest of the site lends itself to other open space uses, such as allotment and playing field use, leaving more land within the residential areas for housing development.

Green Infrastructure Map



Appendix 4 – Guidelines for Remediation

A4.1 The Stanton Regeneration Site sits on land which has experienced around 200 years of sustained heavy industrial practices and an even longer history of ironstone and coal mining. This history has inevitably left a legacy of land stability and land contamination issues. Though industrial developments have been approved and constructed, particularly along Low's Lane immediately south-east of the SPD site, the promotion of new homes, open space and community facilities requires a comprehensive approach to achieve a high quality remediation.

Contamination

A4.2 The legacy of ironworking has left a layer of made ground across the site that contains inert, soluble and volatile contaminants.

A4.3 The **inert contaminants** are mainly heavy metals, e.g. nickel, chromium and mercury. It is recommended that these are sealed under a capping layer. To be effective the capping layer should be applied at the end of the remediation process, to minimise the risk of re-contamination from later extraction work. This suggests that service trenches are dug prior to capping, and that buildings are built on slab foundations to avoid digging strip foundations through the capping layer. This approach would also reduce the risks to construction workers. Uncapped areas may spread contaminants as wind blown dust or surface drainage transported silt. This favours a program of works starting upwind and upslope where possible. Where this is not possible then wind traps / catch dams may be required to minimise re-contamination of capped areas, which might be achieved through the placement of suitably aligned road sub-bases.

A4.4 The **soluble contaminants** including arsenic, cyanide and selenium, pose most risk to ground waters. Testing will establish if hot spots of contamination are causing contamination plumes, in which case they will require treatment. As the natural movement of groundwater under the site is in a north-easterly direction, this also encourages a remediation plan that starts at the southwest and works towards the northeast.

A4.5 The **volatile contaminants**, e.g. poly-aromatic hydrocarbons, are the most troublesome as they can migrate into ground water and volatilise under buildings. Building on slab foundations with suitable vapour barriers will reduce the risk of volatiles entering enclosed buildings and reaching harmful levels in enclosed rooms, but hot spots of volatile contamination, e.g. around former storage tanks, will have to be treated to reduce contamination to a suitable level. This might require material to be excavated and stored in windrows to accelerate bio-remediation.

Land Stability

A4.6 Land stability will be affected by historic mine-workings, building foundations and tipped material.

A4.7 Maps of early mine-workings are poor or non-existent, so it is assumed that the shallow ironstone and coal seams across the site have been subject to historic mining, leaving voids near the surface. These will need to be located and grouted to ensure the stability of the land. There are over 30 recorded mine entries across the site which will also need to be accurately located, assessed, and treated. Once located and treated, the zones of influence of the mine entries will need to be incorporated as 'no-build' zones into the development layout.

A4.8 Building foundations, including former buildings that have been demolished above-ground, have unreliable stability and may conceal cellars or naturally formed voids beneath floor slabs. Such voids can also form under areas of hardstanding. All foundations and hardstandings will need to be excavated. The material can be crushed and graded close to source to fill the resulting voids. This activity will generate a significant amount of dust, and may expose hot-spots of contamination.

A4.9 In addition to the general layer of made ground across the site, there are two main areas of tipped material; the south east corner of Zone H2 and the whole of Zone IP2. The resulting heaps lack any geotechnical strength and are fundamentally uneven. The area in Zone H2 can be cut and used to backfill the reservoir on the site, but the large quantity of foundry sand in Zone IP2 exceeds any requirement for on-site fill and may well have to be exported off-site for use elsewhere.

Zonal Interdependencies

A4.10 Other than sequential factors that favour the remediation and development of some zones prior to others, zones have been defined to keep interdependencies to a minimum in order to maximise the flexibility of delivery across the site.

A4.11 Notwithstanding the above, it is proposed to excavate material from along the Nut Brook and Nutbrook Canal in the proposed wildlife park in order to create improved habitat, and to infill former railway cuttings in the Business Park and Zone IP1. Furthermore, biodiversity enhancements to the Local Wildlife Park are partly required as a consequence of habitat losses from the area proposed as a Business Park. In this context, it is proposed that material excavated from the Local Wildlife Park could be used as fill material for the Business Park and IP1.

Recommended Actions

A4.12 In light of the above discussions, it is recommended that remediation is split into two phases.

A4.13 **Phase 1 Remediation** would include all the excavation work likely to generate dust with the potential for cross-contamination, e.g. demolition, excavation of foundations and hardstandings, treatment of contamination hot-spots and cut and fill operations. It is expected that these will be conducted over broad zones, including in buffer areas to provide new development with a suitable stand-off from the Phase 1 remediation of adjacent zones.

A4.14 **Phase 2 Remediation** would include mine stability works and capping. These are anticipated to have less potential for re-contamination and so would be carried out as needed during the redevelopment of each zone. Where mining legacy features are identified that straddle zone boundaries, it will be necessary for appropriate remediation work to extend into adjacent areas as required.

Appendix 5 – Guidelines for Neighbourhood Traffic Management

A5.1 Traffic modelling confirms that traffic increases will be experienced in all neighbourhoods around the Stanton Regeneration Site. Engagement with local communities has indicated that the priorities for managing this traffic vary between neighbourhoods, suggesting the following mitigation:

Dale Abbey and Stanton-by-Dale

A5.2 The priorities here are to slow vehicle speed and enhance the character of the area. A rural character zone is proposed, extending from the Littlewell Lane and Quarry Hill accesses into Stanton-by-Dale, the exit of Stanton Road from Sandiacre, the exit of Rushy Lane from Risley and the junction of A6096 Ladywood Road with Arbour Hill. Within this zone highway design should be amended to enhance rural and village character and to encourage rural road speeds of around 40mph, and village road speeds of around 20mph. 'Soft' traffic calming measures such as removal of features that encourage vehicle speed such as centre-lines, junction priority markings and road warning signage, and the introduction of features that discourage speed such as visual road narrowing, place punctuation and character transition thresholds should be implemented. These measures could be reinforced by changes to legal speed limits where appropriate.

A5.3 There are also strong concerns over the abuse of the existing HGV legal restriction through this area. It is considered that the 'soft' traffic calming measures above will help alleviate the impact of such abuses through enhanced speed control. However, further measures such as clear HGV thresholds at potential turnaround points may also be required.

Western Risley

A5.4 The conservation core of Risley lies along the western end of the B5010 Derby Road, which is currently laid out as a wide 40mph carriageway. Priorities here are similar to the Dale Abbey and Stanton-by-Dale area, and there is significant potential to reduce average speeds through the village to a standard 30mph or less through the types of 'soft' traffic calming measures proposed above. However, to be effective on this wide stretch of road these may require significant interventions, e.g. the creation of central reservation features.

Central Risley and Sandiacre

A5.5 The principal issues for central Risley and Sandiacre are traffic queues at the Derby Road / Rushy Lane / Bostock's Lane traffic lights in Risley and the Derby Road / Station Road / Town Street / Longmoor Lane traffic lights in Sandiacre. The queues cause frustration, produce pollution and encourage rat-running through residential streets. The introduction of SCOOT-style intelligent traffic lights that respond to actual traffic levels is recommended, which modelling has shown would reduce traffic queues and delays even though the overall volume of traffic would also increase.

A5.6 More efficient operation of the central Risley and Sandiacre junctions will only be effective if the exits to those junctions are free-flowing. Consequently additional measures to ease traffic flow on those exits, including along the critical Derby Road link between the two junctions, should be considered. Nevertheless, facilitating pedestrian movement through the centre of these neighbourhoods is also important. A light controlled pedestrian crossing linked to the operation of the main junctions could be effective on Derby Road, as could a traffic island related to the bus halt on Longmoor Lane.

Kirk Hallam and Hallam Fields

A5.7 These urban areas already experience abuse from poor driver behaviour, and will experience a significant increase in through traffic. The priorities here are to manage increased traffic flow safely on principal routes, whilst also promoting walkable and liveable residential neighbourhoods.

A5.8 For Kirk Hallam, the main increase in traffic will be from Sowbrook Lane to the A6096 Ladywood Road (west), via Dallimore Road, Nutbrook Crescent, and St Norbert Drive (west). Physical measures are required along this route to encourage vehicle speeds within existing speed limits. These are likely to focus on narrowing of the carriageway, e.g. by prioritising on-street parking, tree planted verges, or widened footways etc., as appropriate, having regard to the residential amenity needs of each section of the route. Squaring-off side junctions would further increase safety and reduce rat-running by slowing turning traffic. The existing junctions at St Norbert Drive / Ladywood Road (west) / Godfrey Drive and Dallimore Road / Nutbrook

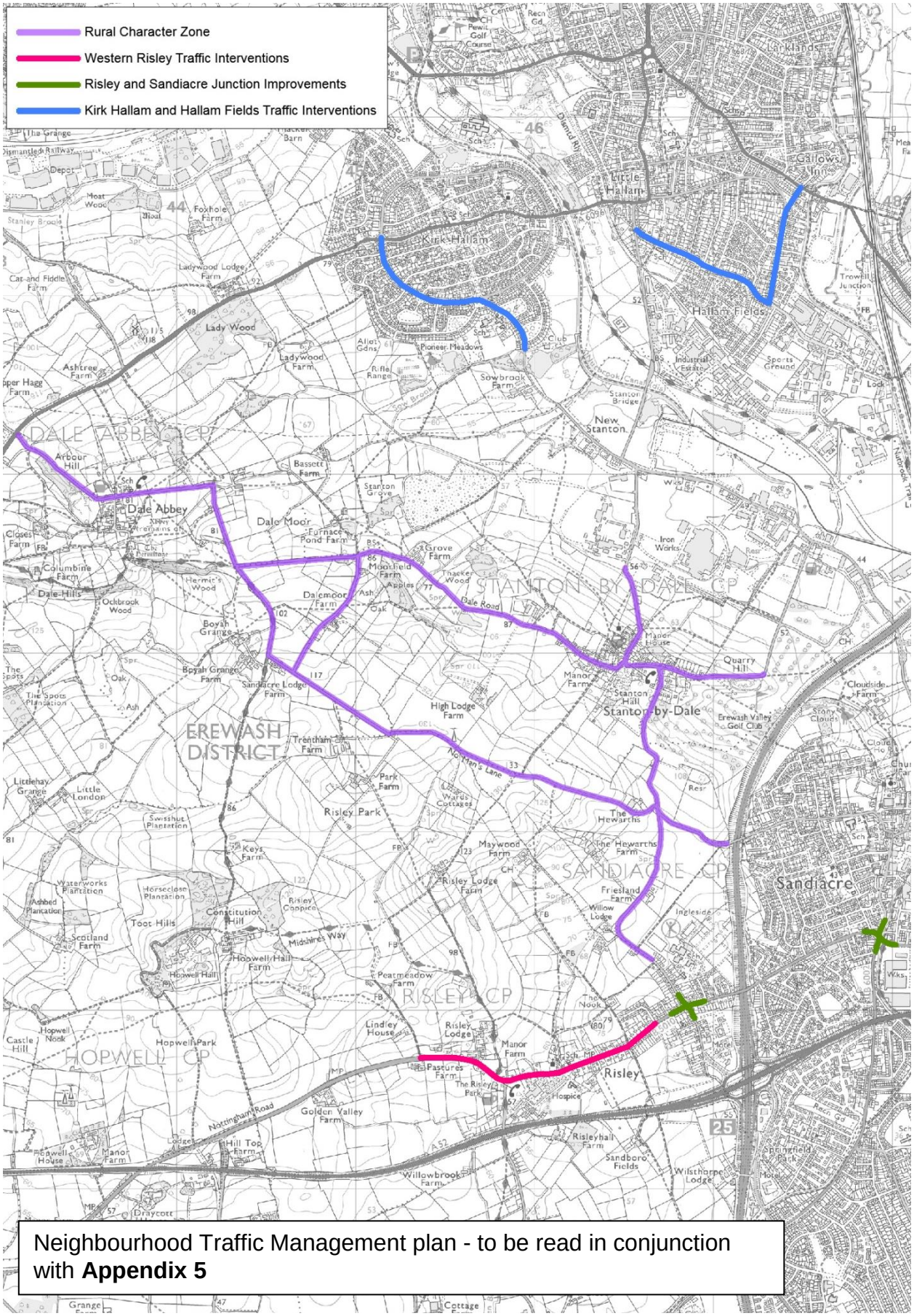
Crescent / St Norbert Drive could both benefit from rationalisation to improve safety.

A5.9 For Hallam Fields, the main traffic increases will be along Longfield Lane and Merlin Way and via Corporation Road and Thurman Street to the A609 (south). Longfield Lane and Corporation Road are already black-spots for speeding, and further measures to effectively manage speed there will be required, such as roadway narrowing and squaring-off side junctions. Traffic lights at the Thurman Street / Nottingham Road junction would facilitate flow, but with the effect of increasing the volume of traffic through the neighbourhood and adding delays to the principal route of Nottingham Road itself, and so are not favoured. However, traffic queueing back from this junction along Thurman Street might rat-run through residential areas to find other access to Nottingham Road. Physical and regulatory changes to the public highway in the area from The Triangle to the junction of Little Hallam Lane with Inglefield Road are therefore likely to be required.

A5.10 Alongside measures to manage traffic, other measures to promote the 'walkability' of these neighbourhoods will be required. This could be achieved by creating a network of walking and cycling routes across the neighbourhoods, centred on a framework of quiet residential roads connected to form longer routes by off-road walking and cycling links and pedestrian / cycle priority crossings of traffic through routes e.g. using speed tables. For Kirk Hallam, the key element could be an 'inner loop' encompassing Kenilworth Drive and Oliver Road, with an off-road link to Ilkeston via the Nutbrook Trail offering an alternative to the busy A6096 Little Hallam Hill for walkers and cyclists. For Hallam Fields the priority might be alternative north-south routes to the busy A609 Nottingham Road and the A6096 Stanton Road, e.g. utilising the residential streets of Hedges Drive – Queens Avenue – Inglefield Road – Whitworth Road, and Eagle Road - Birdcroft Lane – Kirkby Avenue – Amberley Close – Field Rd.

Implementation

A5.11 Detailed interventions for all of the above measures will need to be designed in consultation with Derbyshire County Council Highways Authority, e.g. in conjunction with a planning application for the Stanton Regeneration Site. However, where opportunities arise to implement elements of this framework in advance of that, they should be taken.



Neighbourhood Traffic Management plan - to be read in conjunction with **Appendix 5**