

## Urban and Landscape Analysis

- 8.1 This part of the baseline report analyses the urban and landscape aspects of the site and its surroundings. The section covers nine topics, these being: Relationships with the Wider Context; Topography and Water Flows; Microclimate; Historic Growth; Relationships with the Local Context; Movement and Linkages; Land Use, Facilities and Accessibility; Landscape and Open Space Character; and Built Form Character. Each topic aids understanding and will inform future development proposals.
- 8.2 A brief description of what the analysis of each topic aims to achieve is given below. A detailed analysis of this is provided at Appendix 6, in the form of plans.
- 8.3 **Relationships with the Wider Context:** This looks at the study area's position within the regional and borough context and brings out in particular the relationship with Chesterfield and its train station, as well as important landscape elements and connections such as the canal, river, parks and regional cycle routes.
- 8.4 **Topography and Water Flows:** This looks at the topography of the study area and its surroundings so as to ensure an understanding of the physical context of the site as well as its impact on water flow and drainage. This will be important as it will help towards ensuring sustainable development with respect to water drainage and fitting within the existing context.
- 8.5 **Microclimate:** In a similar way this information aims at ensuring a good understating of the natural elements with respect to sun paths and wind patterns. These will again inform the development to increase its sustainability in relation to maximising the use of passive and natural energy as well as ensuring good microclimates (e.g. avoiding the creation of wind tunnels and ensuring sunny open spaces).
- 8.6 **Historic Growth:** This looks at the study area's historic development so as to provide a deeper understanding. In particular it helps understand the type of development, how it took place and its impact on the natural landscape.
- 8.7 **Relationships with the Local Context:** Using the topography, sections through the study area have been drawn up so as to illustrate further, the physical relationship of the area with the surroundings and strong physical elements in the landscape such as the railway, river and canal. A visual analysis on views into and out of the area has also been produced.
- 8.8 **Movement and Linkages:** This part of the analysis looks at the movement framework which sets out the main connections into and through the study area and main arrival points. It also studies the connectivity of the area.
- 8.9 **Land Use, Facilities and Accessibility:** This maps out the spatial distribution of land uses and as a result starts to identify broader character areas. It also looks at accessibility to community facilities.

8.10 **Landscape and Open Space Character:** A deeper analysis of the landscape character is provided in this section. It also looks at the habitat and ecological value of the study area and provides a strong visual analysis of the sites characteristics.

8.11 **Built Form Character:** This section goes into more detail with respect to the character of the various types of development and built form in the study area. This is done using figure ground maps, historical mapping and photographs.

8.12 A landscape character analysis was carried out in spring 2009. The full study is available in appendix 6.

Essentially the site is a Riverside Meadow landscape character type, as described by the Derbyshire Landscape Character Assessment, situated in the Nottinghamshire, Derbyshire and Yorkshire Coalfield National Character Area, as described by Natural England. However, that riverside landscape has undergone very significant alteration to topography, hydrology and vegetation due mainly to almost 200 years of heavy industrial use, mineral extraction and land filling.

There are substantial areas of intact agricultural land in both arable and pastoral use surrounding the site but these are fragmented by urban fringe. This contrast between flat fluvial topography and the rolling topography of the surrounding countryside, as well as the wide spread presence of disturbed ground, post industrial water bodies and colonising vegetation means that there is a great deal of local variation in microlandscapes. The landscape character analysis describes 31 distinct character areas in and around the site. These range from flat and featureless former industrial sites to a steep and wooded river valley, railway and canal corridors.

Several key issues arise from the study and classification of the landscape:

- Much of the site is used informally by walkers who value the semi-natural aspects of the area, especially those areas accessible from the canal side;
- There are many good views, both into and out of the site, that are worth considering when planning future development;
- The River Rother is, due to its virtual canalisation, and underused and poorly visible landscape resource; and
- Much of the peripheral transport infrastructure is a barrier to entry to the site; however, this isolation has benefits in terms of providing relatively secluded areas.

8.13 In 2008 Chesterfield Borough Council commissioned ECUS Ltd of Sheffield to conduct an ecology survey for the Staveley Area Acton Plan.

The report describes a site with a regionally important broad habitat in the form of the canal and river valley that is “of importance to nature conservation at a district level”. Other features of the site are “of importance to nature conservation at a local level” i.e. areas of semi-aquatic vegetation, ten individual ponds, and two areas of semi-improved neutral grassland. This last feature “could be significantly improved with sensitive habitat” Elsewhere are features considered to be “of importance to nature conservation within their zone of influence only” including areas of scattered and dense scrub, areas of marshy grassland, tall ruderal plant communities along water courses and areas of colonising annual and perennial plants on recently demolished sites.

Although there are no records of bats, great crested newts, otters, or water voles for the site, there are several records of these animals with 2km of the site. Moreover, the report states that the variety of habitats, and the degree of connectivity among these habitats, “provides good opportunities for foraging” and that they “offer good potential nesting and foraging areas for a variety of bird species.”

Further dedicated surveys, conducted at the appropriate seasons and according to best practice, are recommended into:

- Invertebrates
- White-clawed crayfish
- Great Crested Newts
- Reptiles
- Birds
- Water voles
- Bats

The most important message from the habitat survey is that the emerging vegetation and habitats provide a resource and foundation for the creation of a landscape framework that fosters a reasonable degree of biodiversity within which new development may occur.

- 8.14 The main conclusions which resulted from the urban and landscape analysis have been summarised below and are grouped according to five themes. These are: Movement, Character, Form, Green Infrastructure and Environmental. The constraints and opportunities plan (Plans 8.1 and 8.2 respectively) provide a summary of this section.
- 8.15 In relation to **movement** there is the potential to:
- Ensure good access to public transport if the new road linking Staveley to Chesterfield is strategically located with appropriate connections into the site.
  - Strengthen connectivity of the site with surrounding areas as part of new development.
  - For new green pedestrian / cycle routes across the site in particular on a North – South axis as well as linking into the existing Trans-Pennine and Cuckoo Trail.
  - Use the Canal as a transportation / recreational route which would suggest developing a basin and appropriate facilities; and
  - For a local railway station.
- 8.16 On the other hand there may be issues due to:
- Abrupt level changes and the barrier to movement created by these.;
  - The railway as a strong physical barrier;
  - The canal and river as physical barriers;
  - Site ownership and management which may constrain movement; and
  - New road and junctions which may also inhibit movement.
- 8.17 In relation to **character** there is the potential to:
- Strengthen distinctiveness by re-using buildings which have industrial heritage;
  - Consider views to and from existing settlements and landmarks to increase identity and uniqueness of the development as well as strengthen the sense of orientation;
  - Vary the building typology to integrate with and connect with the existing context as well as create a new character of 'living in the green'; and
  - Create new views and experiences of the site from the surrounding area.
- 8.18 On the other hand there may be issues due to:
- The strong character of both the river and canal, and to a lesser extent other water bodies, may be a constraint on the character of new development; and
  - The large areas of arable farmland may be a constraint on the development of differing landscape types in and around the site
- 8.19 In relation to **form** there is the potential to:
- Create new frontages which open up the site. These could also be green frontages showcasing the potential green character of the site;
  - Create a new hub/nodal/focus point – possibly use existing water bodies and old industrial buildings to strengthen its character;
  - Use the new development to improve physical and visual relationships with the existing settlements;
  - Create gateways to the site showcasing heritage and conservation areas of the site; strong landscape / green character; and new commercial character;
  - Locate higher / lower buildings to fit with the topography and change in levels and to integrate with the surrounding settlements as well as ensure well lit green corridors;
  - Use the built form to improve micro-climate conditions (e.g. spaces protected from the wind);
  - Use development and waste material / demolished material to bridge changes in level, increasing connectivity and strengthening physical relationships;
  - Use changes in level to hide car-parking and integrate it within the development so that it does not dominate;
  - Create a balanced pedestrian oriented environment;
  - Provide a variety of development typologies to increase offer and diversity in terms dwelling types and interaction with commercial development; and
  - Devise flexible development typologies to deal with quick changing markets and demands (i.e. mixed and integrated developments and compatible uses).
- 8.20 On the other hand there may be issues due to:
- Abrupt level changes making it more challenging to connect with existing settlements while at the same time providing an interesting landscape; and
  - The river and canal, and to a lesser extent other water bodies, may be a constraint on the form and layout of development.

8.21 In relation to the **landscape** there is the potential to:

- Increase the leisure / recreational value of the area by strengthening its green infrastructure;
- Develop green infrastructure as a multi-use resource to include educational, water and wildlife conservation and sustainability objectives;
- Strengthen green character by creating a green network / corridor along the canal and river and link into the wider existing green network.;
- Preserve and develop existing habitats;
- Increase wetlands to mitigate flood risk;
- Re-introduce the river's natural meandering characteristics;
- Use shelter belts to improve the micro-climate; and
- Create a diversity of distinct characters areas along the length of the canal, ranging from a more urban environment to open green landscape to an enclosed wooded one.

8.22 On the other hand there may be issues due to:

- Flood prone areas;
- The presence of emerging valuable habitats and protected species may constrain development;
- Steep sides to River Rother, inhibiting easy use and access;
- Existing ground conditions e.g. contamination, absence of soil etc may make creation of green infrastructure difficult
- Exposure of certain areas of the site, which may make creation of green infrastructure difficult;
- Potential for the new east-west road to sever or disrupt green infrastructure;
- Flooding may prohibit the development of certain types of recreational landscapes – e.g. top class sport pitches; and
- Large plot developments may not lend themselves to an integrated or finely grained green infrastructure.

8.23 In relation to the **use** of the site there is the potential to:

- Increase sustainability by providing a nodal point with facilities for existing residents and ensure their sustainability through the increased resident population provided by new residential development;

- Increase the leisure, recreational and local tourism value of the area;
- Explore possibilities for diversifying markets and potential users.
- Provide uses / facilities to target areas of deprivation / segregation; and
- Develop urban agriculture.

8.24 On the other hand there may be issues due to:

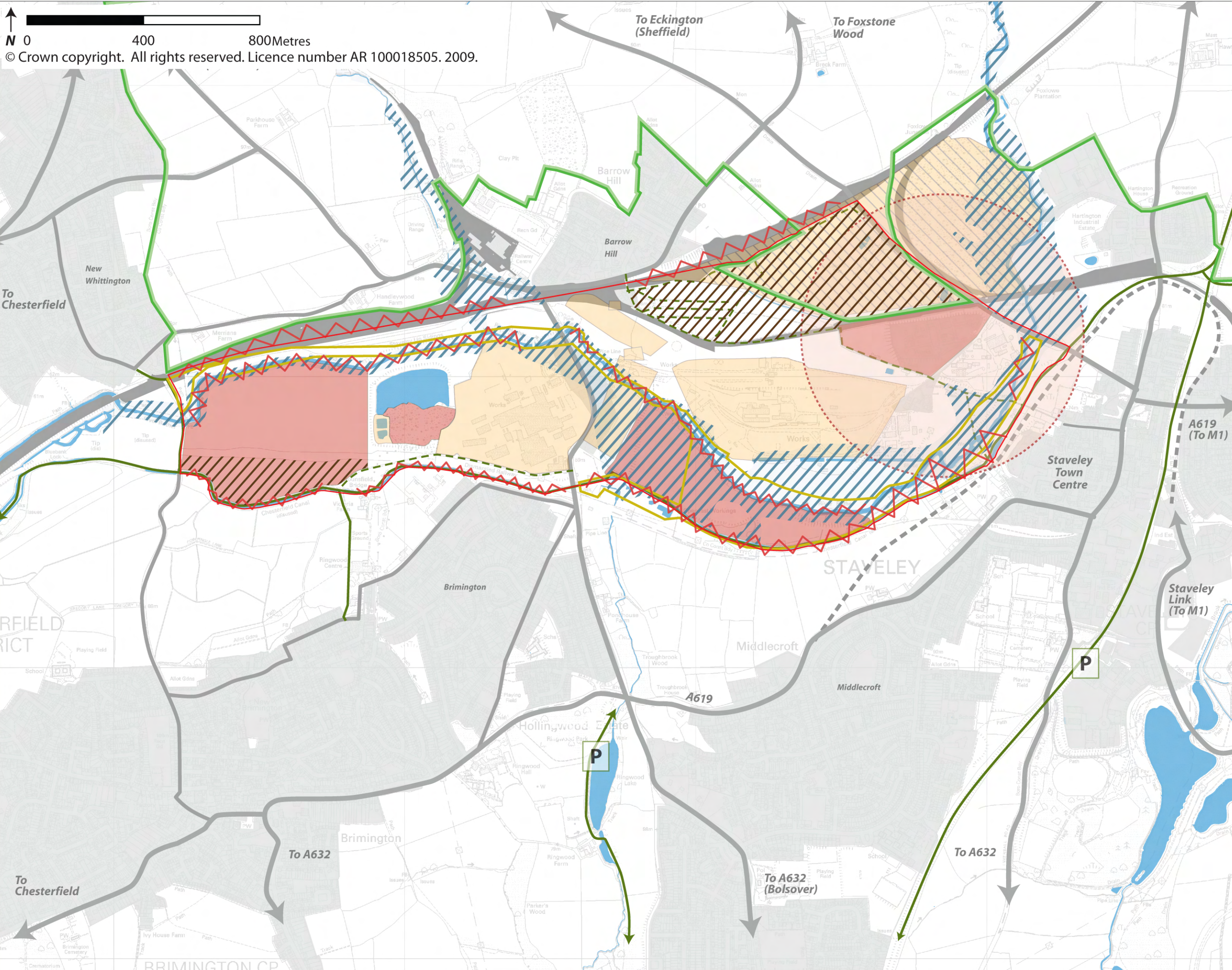
- Dereliction hazards;
- Absence of facilities;
- Contamination as a result of industrial uses; and
- Existing Industry and its 500 m radius exclusion zone

8.25 In relation to the **environmental** factors there is the potential to:

- Consider the supply of renewable energy sources such as biomass;
- Consider the production of water-generated electricity from the River Rother;
- Consider the use of solar panels for electricity generation;
- Increase wet lands and provide areas for sustainable drainage and water storage for future re-use; and
- Consider water drainage as part of the development layout so as to maximise natural water flow and minimise flooding.

8.26 On the other hand there may be issues due to:

- Adverse visual impact of solar panels.



**Key**

- existing railway & road network
- proposed route
- existing main connections (pedestrian & cycle routes)
- existing tertiary route (pedestrian route only)
- existing watercourse
- physical barrier limiting pedestrian movement
- 500 m buffer zone due to chemical works
- significant constraint (geo-tech)
- constraint (geo-tech)
- constraint (this could be remediated for development at a cost - currently remediated for agriculture) (geo-tech)
- flood prone areas (zones 3 & 3i)
- planning constraint (green belt)
- planning constraint (open countryside / other land)
- parking areas associated with walking trails
- Tree & woodland planting

**STAVELEY AREA ACTION PLAN**

EXISTING CONSTRAINTS

Scale: April 09  
Reviewed by:SA

job	drawing	rev
4455	8.1	A

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